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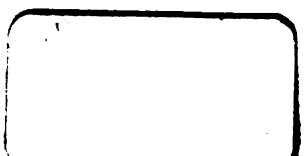

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MEDICAL RECORD

A Weekly Journal of Medicine and Surgery

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Volume 24

JULY 7, 1883—DECEMBER 29, 1883

NEW YORK

WILLIAM WOOD & COMPANY

1883

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The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 1 NEW YORK, JULY 7, 1883 **Whole No. 661**

Original Articles.

THE FIXATIVE POWER OF TRACTION IN THE TREATMENT OF HIP DISEASE.

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THAT traction possesses to a certain degree the power of fixing the joints of the extremities is not a new idea in surgery. It was entertained in the last century by Desault, whose apparatus for fracture of the femur is described as follows: "This consists, to speak in general terms, in taking the points of extension above, on the tuberosity of the os ischium of the diseased side, and below, on the malleoli; in securing the straps or rollers, destined for making extension, on the two ends of a strong splint, placed along the outside of the limb; and in converting, so to speak, the pelvis, the thigh, the leg, and the foot, into one entire and solid piece."[1] In 1835 Lesauvage wrote that one of the objects of continued extension in the treatment of hip disease is to prevent motion.[2] Mr. Liston, seeking to disparage the use of the weight and pulley in the treatment of hip disease, said: "All this may amuse the patient's mind, perhaps, but I do not think any good can come of it further than preventing motion."[3] M. Philipeaux writes, "that in the absence of retentive splints, traction may be employed to secure immobility of the limb."[4] Dr. C. Fayette Taylor refers to "the quiet fixation of the joint, which the splint has been a convenient means of accomplishing."[5] Dr. Louis Bauer says: "Whatever benefit I have derived from it (extension) is unquestionably due to its collateral effect upon fixing the affected articulation."[6] Mr. Thomas, referring to extension, writes: "In its application it involves, unavoidably, a fractional degree of fixation."[7] Dr. L. M. Yale writes: "When the muscular spasm is urgent, fixation cannot be secured, save by the use of a force as constantly acting as that which is to be overcome, and the agent best adapted to this purpose is traction."[8] Dr. J. A. Wyeth writes: "Extension is made by means of the screw-key, until there is freedom from pain and a comfortable fixation of the limb."[9] Dr. N. M. Shaffer writes: "When traction exists the patient has the advantage of that peculiar and perfect immobility which the extension of the long hip splint affords."[10]

The fixation of the hip-joint is one of the most difficult problems in mechanical surgery.[11] In the first place, this articulation is a ball and socket. Aside from this the difficulty is due, in a great measure, to the fact that the hip-joint is situated near the centre of the body. In order to understand the subject clearly, it may be well to take an elementary view of the relation of the muscles to the joints, as follows: The muscular apparatus of a joint has a twofold function. It can at will either move or fix the joint. If the joint be remote from the centre, the muscles will be more effective in their control either for motion or fixation, because of the disproportion in size and weight between the part above and that below the point of motion. There is philosophy as well as humor in Dundreary's witticism: "Why does a dog waggle his tail?" Answer. "Because the tail can't waggle the dog."[12] As the wagging of a dog's tail is not only motion alternately right and left, but also arrest of motion right and left, it is clear that motion and fixation, as effects of muscular action, are correlative, and if the part below the point of motion is more easily moved on account of its comparative lightness, it will also be more easily fixed, and if more easily fixed, disease attacking the joint will be less serious and more easily curable. In this lies a partial explanation of the fact that joint diseases of the lower extremity become less serious as we pass from the hip toward the phalanges. Aside from the fact that the hip-joint has a peculiarly wide range of movement, if the entire limb were no larger and heavier than the foot, hip disease would not be more serious than ankle disease. A striking illustration of this point is the case related by Mr. Hilton,[13] in which the patient had disease of the left knee and the left hip. Amputation, which was performed above the knee, promoted recovery at the hip by facilitating the control of the latter joint by muscular action. To quote Mr. Hilton's words: "In fact, I may say the hip-joint was cured by cutting off the leg."

Furthermore, a joint which is situated near the centre of the body is peculiarly liable to be disturbed by the movements of other members. The distal phalangeal joint is not appreciably affected by movements made elsewhere, but the hip-joint is inevitably disturbed by the movements of other parts of the body. In the words of Sir Charles Bell: "There is no rest to it; every motion of the body may be said to be accompanied with a movement of the head of the femur within its socket; even if the arm be raised, there is a change in the centre of gravity of the body, and the trunk must be poised anew upon the hip, as the centre of all our motions. It is remarkable how the slightest degree of movement in another part of the body is, as it were, necessarily accompanied with a motion of the surfaces of those bones which compose the hip-joint. If ever you should see a patient suffering with acute inflammation of the hip, you will see the proof of this; for every motion of the body gives extreme pain, and proves an additional source of excitement and inflammation. It is this consideration which leads us to understand the difficulty of curing the disease."[14]

Another most serious obstacle to the successful fixation of the hip-joint is found in the fact that a retentive splint acts here at a great mechanical disadvantage. If the distance from the acetabulum to the crest of the ilium were equal to that from the head of

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[1] Treatise on Fractures, p. 243. Translated by Charles Caldwell, M.D. Philadelphia, 1817.
[2] Arch. gén., p. 280. November, 1835.
[3] Lancet, pp. 237, 238. November 25, 1843.
[4] Traité de Thérapeutique de la Coxalgie, p. 285. Paris, 1867.
[5] THE MEDICAL RECORD, p. 290. September 1, 1867.
[6] Lectures on Orthopedic Surgery, p. 282. Second Edition. New York, 1868.
[7] Hip, Knee, and Ankle, p. 10. Third Edition. Liverpool, 1878.
[8] THE MEDICAL RECORD, p. 27. January 12, 1878.
[9] New York Medical Gazette, p. 243. April 17, 1880.
[10] Archives of Medicine, p. 198. October, 1880. The opinion has been expressed by the present writer that "traction, however applied, is unavoidably accompanied by fixation," that "the advantages derived from the traction exerted by the hip splint are due solely to the fact that it secures fixation," and that "fixation is undoubtedly one of the principal functions of the long hip splint." New York Medical Journal, p. 17. July, 1882. St. Louis Courier of Medicine, p. 370. May, 1881. THE MEDICAL RECORD, p. 738. June 26, 1880.
[11] In 1828 Sir Charles Bell said: "No instrument has ever been effectual in keeping the thigh and trunk fixed." London Medical Gazette, p. 139, January 12, 1828.

[12] Our American Cousin, by Tom Taylor, Act I., scene 1.
[13] John Hilton: Rest and Pain, pp. 298–300. London, 1863. American Edition, pp. 178, 179. 1879.
[14] Loc. cit., p. 138.

the femur to the condyles, or if, in imagination, we were to convert the pelvis and the vertebræ into a single bone, a retentive splint would doubtless be as effective in securing fixation as it is when used at the knee, or when applied to a fracture in the middle of the shaft of a long bone.[1]

In view of these difficulties, can we reasonably hope to secure fixation of this joint by so simple a method as traction? That this expectation is not entirely unreasonable, is indicated by the fact that the most remarkable result of the application of purely fixative apparatus, viz., the relief of pain, is also the result of the application of apparatus that is purely tractive. The following observations prove the anodyne quality of the simple retentive apparatus. Dr. Coates, referring to the use of Dr. Physick's hollow carved wooden splint, which extended from the external malleolus to the middle of the thorax and embraced nearly one-half of the trunk, wrote: "The patient frequently stated that he had obtained, in the night following its application, sounder sleep than for many weeks or even months previously."[2] M. Bonnet, referring to *le grand appareil*, which embraced two-thirds of the circumference of the lower limbs and the lower part of the trunk, wrote: "I have seen the pain and inflammation disappear as soon as the limb was brought into position and held immovable." Relating a case, he wrote: "From the moment of application the pains diminished."[3] M. Philipeaux, referring to a case in which Bonnet's apparatus was applied, wrote: "The next morning I learned that the patient, who had moaned incessantly the night preceding the application, had slept calmly for four hours."[4] Mr. E. J. Chance's splint embraces the thigh and a large part of the trunk, and Mr. E. Noble Smith speaks of "the almost immediate relief from pain which the patient experiences when the splint is applied."[5]

On the other hand, the anodyne effect of simple traction is equally remarkable. It was observed by M. Blandin that on the application of extension and traction the acute pains of hip disease "disappear as if by enchantment."[6] Gustav Ross said that when the weight and pulley were used in the hip disease of children, "the pain lessens astonishingly."[7] Dr. John Watson, describing his treatment of a patient in the acute stage of hip disease, said: "I had hardly put on the counter-extension before the girl was entirely free from pain. It operated beautifully and instantly."[8] Dr. E. S. Cooper, referring to his ingenious device for traction and counter-traction, writes: "Often have patients slept better the first night after its application than they had for many months previously."[9]

When we find, as above, that pain is controlled equally by direct fixation and by traction, can we escape the suggestion that perhaps traction is in itself an effective method of securing fixation? It has been stated as an objection to this view, that the relief which follows traction is too instantaneous to be considered as the result of fixation. It is thought to occur before immobilization could have produced any effect. In reply it may be said that the pain of hip disease is composed, to a certain degree, of extreme apprehension and mental and muscular fatigue, produced by prolonged efforts to prevent motion, with sudden sharp accessions when motion is inadvertently made, or when the patient starts in the act of falling to sleep. Such pain as this is capable of instant relief or abatement by fixation. In certain cases there is a severe pain not controlled by mechanical treatment, the occurrence of which, sometimes at least, accompanies the development of an abscess.

We have seen above that fixation has, by a number of writers, been recognized as an accompaniment of traction applied to the hip-joint. We have also seen that clinical observation renders it not improbable that traction acts as a fixative power, because its first effect is identical with that of apparatus which is purely fixative. The important question arises whether it is demonstrable that traction secures fixation. This question may be answered affirmatively. Take two rods of iron or soft steel, of sufficient length, and form an eye in the end of each by bending its extremity into a small circle. When the rods are joined by these eyes they will together resemble two links detached from a surveyor's chain, and there will be wide and free mobility at the joint. Then tie the free end of one link to a staple and apply moderate traction, by means of a weight and pulley, to the free end of the other. It is seen at once that the mobility which existed at the joint between the links is absent so long as the traction continues.[10] Although the immobility thus produced is liable to be overcome by a competent disturbing force, it is nevertheless quite sufficient to relieve the pain of hip disease and to promote union in fracture of the long bones. But in the treatment of hip disease fixation by the weight and pulley is open to the objection that it necessitates prolonged recumbency, and is liable to wilful disturbance. Discarding for these reasons the weight and pulley, let us subject the two links of surveyor's chain to traction in a hip splint, tying the free end of one to the perineal straps and that of the other to the leather strap which leads to the foot-piece. The result of applying moderate traction by the rack and pinion when the parts are thus arranged is fixation of a remarkably stable and indestructible kind.

It is worthy of note, furthermore, that when the hip splint is applied to a patient traction is made in such a manner that fixation is rendered more complete by a part of the apparatus which acts as a brake. The hip splint is so well known that it does not require a description here. It is sufficient to say that the apparatus here referred to has a less flexible upright and pelvic band than have been found in some forms of the apparatus, and also a bolt and nut connecting the two parts, by the use of which they can be firmly fixed at any angle desired by the surgeon. It is provided with suspending straps passing over the shoulders, by which the adhesive plasters and the affected limb are relieved from the weight of the splint when raised in walking. It also has a U-shaped attachment[11] at the level of the lower part of the thigh, by which motion is more fully arrested than by a flexible strap.[12] The parts which act as a brake are the perineal straps. A brake is described as follows: "An apparatus used for retarding the motion of a wheel by friction on its periphery." As applied to a patient, the hip splint, when traction is exerted, makes friction on the tuberosities of the ischia and the rami of the ischia and pubes, these parts representing the periphery of a wheel revolving at the upper end of the femur

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[1] One of the difficulties in the treatment of Colles's fracture of the radius arises from the shortness of the lower fragment. If this fragment, the carpus, the metacarpus, and the phalanges, were one piece the management of the accident would be greatly simplified.

[2] Amer. Jour. of Med. Sciences, p. 307, foot-note, February, 1831.

[3] Traité des maladies des articulations, vol. ii., pp. 356, 361. Lyon, 1845.

[4] Traité de thérapeutique de la coxalgie, p. 250. Paris, 1867.

[5] E. Noble Smith: The Surgery of Deformities, pp. 133–135. London, 1882.

[6] Maisonneuve: De la coxalgie, Thèse de Paris, p. 228. 1844. Ann. de la chir. fran. et étrangère, vol. xiii., p. 192. 1845.

[7] Deutsche Klinik, p. 98. March 4, 1854.

[8] Am. Med. Times, p. 310. May 12, 1861.

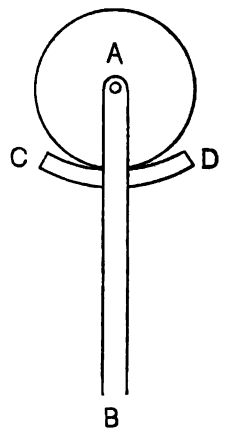
[9] San Francisco Medical Press, p. 145. July, 1861. Dr. Julius A. Post has noted the remarkable relief afforded by the weight and pulley in a case of hip disease in an adult (Philadelphia Medical News, p. 537). November 25, 1882.

[10] In this way we arrive at a competent explanation of the efficacy of traction by the weight and pulley in the treatment of fractures, a method the antiquity of which has been traced by Mr. J. H. James (Address in Surgery, Transactions of the Provincial Medical and Surgical Association, vol. viii., pp. 213–216, 1840) and A. S. Gohier (Nouvel appareil pour le traitement des fractures du col du fémur, p. 36. Paris, 1835). The explanation which depends on the supposition that traction places the muscles on the stretch and thus makes them retentive splints is open to the objection that traction is powerless to stretch the muscles to a degree even approaching the normal lengthening to which they are accustomed in the ordinary movements of the limb. If a muscle is in extreme normal contraction, its opponents are of course relaxed and lengthened, and when the parts are at rest this potential elongation is so great that traction would be incompetent to stretch the muscles enclosing a long bone in any degree, still less to give them enough tension to qualify them for the functions of a retentive apparatus. For the same reason the efficacy of traction (continuous extension) in the treatment of fractures can hardly be said to depend on its ability to tire out the muscles whose contraction produces displacement of the fragments.

[11] Described in THE MEDICAL RECORD, p. 738, June 26, 1880.

[12] Some practical points in the management of this apparatus have been considered in the Medical Gazette, pp. 413–415, December 10, 1881.

through a considerable arc in the plane of flexion and extension. If friction can be made on the periphery of this wheel by a process or offshoot of the femur, motion of the pelvis on the femur (or of the femur on the pelvis) will be retarded or prevented. The perineal straps are a process of the femur inasmuch as they are carried by the pelvic band, which is immovably attached to the upright, and this latter is practically of one piece with the femur, especially if the femur is held parallel with the upright by the U-shaped piece attached at the level of the lower part of the thigh. In the accompanying figure let the circle represent the pelvis, A the acetabulum, A B the femur and the upright, and C D the perineal straps, practically of one piece with A B and applied to the ischiatic tuberosities. When traction is made by the rack and pinion, it is clear that motion at A will be retarded or prevented. In practice it is found that when traction is made, in the case of a patient to whom the hip splint is applied, motion in flexion and extension is prevented, although it may not as yet have been arrested by the disease.



Motion in adduction and abduction is also arrested to a certain degree by this apparatus—adduction by the circumstance that, as the perineal straps are both situated on the inner side of the joint, traction is abductive or in a direction away from the median line; while motion in abduction is opposed by the action of the apparatus as a retentive splint (although its action as such is feeble), applied to the outer side of the limb and pelvis, the retentive force being directed from within outward at the upper part of the thigh, and from without inward at the pelvis and the lower part of the limb.

The question here arises, whether an apparatus so well contrived for the arrest of motion in the hip-joint could not be used with advantage in appropriate cases in the treatment of fracture of the femur, a question worthy of attention because the hip splint not only secures fixation but also permits the patient to walk, a point of importance in the management of ununited fracture. It may also prove to be useful after osteotomy for deformity of the hip.

The idea that hip disease requires the same treatment as fracture of the femur is not new in medical literature.[1] M. Bonnet presented *le grand appareil* for the treatment of hip disease in 1845, although he had described it in all its details in 1839, as an apparatus for the treatment of fractured femur.[2]

In the same manner, but with a longer intervening lapse of time, the complicated apparatus of M. Martin was prescribed by him in 1850 for fracture of the femur, and in 1865 for hip disease.[3] Mr. Ford compared hip disease without an external opening to a simple fracture of the bone,[4] and Sir Benjamin Brodie carried the comparison further, saying: "If it (the cartilage) be extensively destroyed without suppuration, the case may be compared to one of simple fracture; and if there be suppuration, it may be compared to one of compound fracture;"[5] a statement which drew from Dr. Alden March this apt inquiry: "If there be some analogy between the condition of the hip-joint in morbus coxarius, and fracture of the neck of the bone, why should there not be some similarity in the mode of treatment?"[6]

If we recall the morbid anatomy of this disease, in which the integrity of the central portion of the bone is invariably assailed, we can better understand the comparison of hip disease to a fracture of the bone, and the more readily recognize the propriety of treating it by fixation. If hip disease were synovitis, invading, under the pressure of reflex muscular contraction, first the cartilage and then the bony tissue, it would be right to try to diminish this pressure by traction, or any other method believed to be practicable.[7] We might even attempt the difficult combination of traction with mobility, in the hope that motion without friction would perhaps assist the process of repair and secure a recovery without impairment of mobility. But the disease is not synovitis. It is ostitis, beginning in the cancellous tissue, or at the epiphysal junction, excavating the bone, undermining its strength, progressing from within outward, and involving in time all the structures of the joint. In this view it is clear that the proper local treatment is protection from the pressure and concussion incident to walking, and the prevention of motion in the joint. As in a fracture, so in hip disease, the part should be placed in a favorable position for the action of the natural reparative processes which, aided by appropriate general treatment, are, as a rule, able to limit this morbid process when it occurs in parts which, like the ankle, are more easily protected from disturbance and violence by the voluntary efforts of the patient.[8]

It may be said, in criticism of this precept, that the intention in treating a fracture is to abolish mobility, which, in a case of hip disease, it is our desire to retain or recall. In reply, it may be well to state that the cases of real hip disease which recover with perfect motion in the joint itself are rare, no matter what form of treatment or expectancy be pursued. There are, indeed, many cases in which the friends of the patient erroneously believe that motion of the joint has been preserved, basing their opinion on the evident facility with which the patient walks. It is a common idea among non-medical observers that the limb cannot assist in locomotion if there is absence of motion at the hip-joint, while the truth is, that with a perfectly motionless hip-joint walking may be very well performed, and even with considerable grace, by reason of the acquired mobility of the lumbar region of the spinal column, and by the patient's unconsciously taking advantage of the motion of the unaffected hip.[9]

It is not unreasonable, however, to suppose that central ostitis occurring so near the joint as to produce all the symptoms of incipient hip disease, may, in favorable conditions and with treatment commenced sufficiently early, be resolved with perfect motion in the joint. Such cases have been observed. Patients have even been observed to recover from the third stage, with considerable useful motion in the joint. In every case, therefore, whether the disease be recent or in the third stage, the surgeon should try to secure recovery with motion, and it is important to observe that the treatment herein described not only prevents anchylosis, if it can be pre-

[1] In 1779 David de Rouen, referring to diseases of the joints, wrote that notable cures are to be effected "by allowing the parts to remain undisturbed in splints, as in the treatment of fractures." R. Philipeaux: De la Coxalgie, p. 381. Paris. 1867.

[2] Mémoire sur les fractures du fémur, Gazette Méd. de Paris, pp. 579, 580, September 14, 1839. Traité des maladies des articulations, vol. i., pp. 322–324. Lyon. 1845.

[3] L'Union Médicale, Décembre, 1850. De la coxalgie, par Ferdinand Martin, pp. 488–496. Paris, 1865.

[4] Edward Ford: Diseases of the Hip-joint, pp. 132, 133. Second Edition. London, 1810.

[5] Clinical Lectures, p. 287. Boston Edition, 1846.

[6] Transactions of the American Medical Association, p. 503, 1853.

[7] The pathological objections to this view have been presented in the New York Medical Journal, pp. 1-17, July, 1882; the mechanical objections in THE MEDICAL RECORD, pp. 509–512, May 12, 1883.

[8] Remarkable results from expectant treatment in disease of the ankle have been obtained by Dr. James Knight, at the Hospital for the Ruptured and Crippled. Thirty cases have been reported by Dr. T. E. Satterthwaite (Report of the Surgical Committee of the Therapeutical Society, MEDICAL RECORD, pp. 197–202, August 21, 1880) and Dr. V. P. Gibney (Caries of the Ankle in Children, American Journal of Obstetrics, pp. 434–457, April, 1880). These results have not met the appreciation which they deserve. Dr. Gibney writes (op. cit., p. 451) that in ankle disease excision "is rarely ever justifiable." He adds: "The expectant plan of treatment, fully carried out, assures us of more results that are perfect, and more limbs that are useful without the aid of support, than does any other plan known to the profession." These words give appropriate expression to a conservatism closely allied to that which crowns with honor the memory of Fergusson.

[9] Mr. Hilton describes one of his patients, who recovered with a firmly anchylosed hip-joint, as follows: "She is an excellent dancer, frequently dancing for a whole evening, and but few persons know, when she sits down, that the right knee-joint is bent at right angles with the thigh and body, and tucked under the chair to meet the inconvenience of her fixed hip-joint." John Hilton: Rest and Pain, p. 373. London, 1863. American Edition, p. 221, 1879.

vented, by subduing inflammation, but also, if anchylosis be inevitable, provides for the best position of the limb.

The fixation which this apparatus secures is of a peculiar quality. It may be compared to the condition found in some forms of paralysis, when a joint is said to resemble a leaden pipe, which may be bent with suitable force, but retains with sufficient firmness whatever position it may be placed in. This "fractional degree of fixation" is attended with sufficient arrest of motion to allay inflammation, encourage the reparative process, and afford relief from pain; and yet it is not so inflexible as to prevent the gradual correction of the deformity in obedience to the unconscious efforts of the patient to place the limb in its most useful position, which is that of slight flexion with neither adduction nor abduction. This position permits both walking and sitting with considerable facility, although the joint be motionless.

The deportment of the limb under this treatment is observed to advantage in a case that has progressed so far that the patient is confined to his bed while the thigh is in excessive flexion and adduction, and yet not so far that the structurally shortened muscles are an impediment to the reduction of deformity. Almost immediately the adduction is visibly lessened, and is succeeded in a few days by abduction, which in its turn becomes excessive, because the direction of the traction is abductive or away from the median line. But when the patient has gathered strength from the relief of pain and the ability to sleep, which are secured by fixation, and begins to walk with the assistance of the ischiatic crutch [1] furnished by the perineal straps, and with the aid of a high sole on the shoe of the unaffected side, it is seen that the abduction is, in its turn, gradually diminishing; and as the patient resumes active locomotion, still wearing the splint, the limb assumes a position neither adducted nor abducted, in which it is most favorably situated for walking.[2] And while the limb has been making these changes laterally, it will at the same time be reduced from a position of extreme to one of moderate flexion, in which it is most favorably situated for both walking and sitting. The favorable position thus acquired is retained without difficulty until recovery is assured.

TWO CASES OF INCOMPLETE FRACTURE OF THE FOREARM.

By GUY HINSDALE, M.D.,
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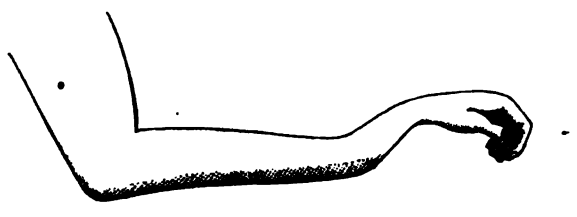
DURING a service of four months in the surgical dispensary of the Episcopal Hospital, nearly fifteen hundred new cases presented themselves. Among these were five incomplete or "green-stick" fractures of both bones of the forearm, one of the radius alone, and one of the clavicle. The patients were all children from one to six years old, excepting two, whose history I will give.

CASE I.—Frank B. T——, aged thirteen, came to the dispensary July 8, 1882. While standing upon a wooden



stool about eighteen inches high, the legs of which were loose, he fell upon a hard cellar floor. He had been reaching high up, holding his left arm in full extension. In his fall his forearm fell across one of the legs of the overturned stool, striking upon its posterior surface and producing the deformity as figured. Although partly stunned by the fall, he noticed his arm resting on the leg of the stool.

Upon presenting himself at the dispensary within half an hour after the accident he did not exhibit great suffering. The bones were bent backward at their lower fifth; the hand and wrist were not greatly swollen, and motion at the wrist-joint was good. The deformity was so marked that before reduction was attempted I obtained the contour of the limb by means of lead ribbon and took the following measurements, the forearm being flexed at a right angle with the arm and pronated: External condyle of humerus to styloid process of ulna, 8¼ inches; external condyle of humerus to styloid process of radius, 8¾ inches.

Mobility and crepitus could not be obtained and the diagnosis of incomplete fracture was made. By means of extension and counter-extension and manipulation the bones were at once restored to their original form. As they became straight snapping of fibres of bone was distinctly heard and felt, but complete fracture did not take place. The forearm was then enveloped in lint soaked in lead-water and laudanum, and straight splints were applied to its anterior and posterior surfaces. The wet dressing was continued a few days until the pain and swelling, which was slight, had subsided.

At the end of the third week the splints were removed and a piece of binders' board was moulded to the anterior surface of the arm. There was still some tenderness at the ulnar side of the seat of injury. The measurements made in the same manner as before were now 9 inches and 9¼ inches. The patient was discharged at the end of the fifth week. Two months later a similar accident befel him, occasioning almost precisely the same condition as described above, and requiring the same treatment.

CASE II.—Esther S——, aged sixteen, a weaver, applied on June 9, 1882. While standing in the mill near her loom, for an instant she rested the elbow of her right arm against the wall, her hand being fully extended. She was instantly struck a sharp, hard blow upon the ball of the hand by the flying shuttle-box, which forced the hand and arm backward toward the wall. The patient was seen about an hour after the accident and found to be suffering greatly. Both bones at the lower fifth were bent backward; the hand was flexed and both it and the wrist were somewhat swollen and of rather a dusky hue. The gentlest touch gave rise to such pain that at the patient's request I asked an assistant to administer ether.

The forearm being flexed at 90° and pronated, the distance from the external condyle of the humerus to the styloid process of the ulna was found to be 8¼ inches. Grasping the forearm near the elbow I then made traction from the wrist. Both bones were firm, neither crepitus nor mobility could be obtained. The deformity was then reduced by grasping the forearm with the left hand, the wrist with the right, and making pressure with the thumbs upon the posterior surface of the arm over the seat of injury. As the bones assumed their proper shape the snapping of their fibres could be distinctly felt and heard. With a great deal of force and firm and gradual pressure, and by placing the arm upon a plane surface and pressing forcibly over the seat of injury, the bones were restored to a straight line. It was quite easy to feel the bony fibres give way, although complete fracture did not take place. The arm was then dressed with lead-water and laudanum and placed on a straight, broad palmar splint, reaching from the olecranon to the finger-tips; after applying compresses at the seat of injury, upon the ulnar and dorsal surfaces, a bandage was applied. Wet dressings were discontinued after a few days and a shorter splint substituted. This was laid aside in about four weeks from the time of accident, and the patient ordered to rub the arm well with soap liniment.

Five weeks after the accident the arm looked and felt almost precisely like its fellow, but by passing the hand along the ulna at about the lower fifth a small ridge of callus could be felt. Measurement was again made in

[1] The question of axillary or ischiatic support has been considered in THE MEDICAL RECORD, pp. 1-3, July 2, 1881.

[2] Cases treated in this manner, in the third stage, have been reported in the Illustrated Quarterly of Medicine and Surgery, pp. 45-52, April, 1882.

the same manner as before and found to be 9¼ inches. No tenderness over the seat of injury. The accompanying cut illustrates the deformity:

In most of the works on surgery very little is said upon the subject of bent and incomplete fractures. The works of Gross [1] and Hamilton,[2] and an article by John Rhea Barton,[3] contain the most satisfactory references.

In young children it is possible for bending of bones to take place without perceptible rupture of the bony fibres;[4] the outline is curved, while incomplete fracture in older children usually presents an angular deformity. These curving bones yield more easily to pressure and even of themselves show a tendency to resume their proper shape; incomplete fractures, however, are usually restored with difficulty. As for impacted fractures in the forearm, they usually occur in adults, and by an examination of the bones the rough line of the fragments can almost always be recognized. Efforts to elicit crepitus are, in all these cases, unsuccessful.

As for the treatment in very young children spontaneous recovery may occur. It is, however, better to secure the proper outline by firm, gradual pressure, and the application of splints. Complete fracture may occur in the effort to reduce the deformity and need not excite alarm. The case is then transformed to one of simple fracture. But as this accident destroys the continuity of the bone, and is apt to be followed by a certain deformity, it should, if possible, be avoided.

In regard to the cause of incomplete fracture the prevailing impression has been that it is due to differences in the proportion of the organic to inorganic elements of bone at the different periods of life. Gray [5] quotes Schreger and Rees, who state that the proportion of the earthy element increases with age, and Stark [6] and Von Bibra, who state that the proportion is constant. The later analyses of Mr. R. Tuson,[7] Demonstrator of Chemistry at St. Bartholomew's Hospital, confirm this statement. The analysis was made of equal weights of long bones of different ages, viz.:

	At birth.	10 years.	36 years.	71 years.
Organic matter	35.37	32.62	32.04	32.94
Inorganic matter	64.63	67.38	67.96	67.06
	100.00	100.00	100.00	100.00

The predisposition of young bones to incomplete fracture must therefore be sought for in physical rather than in chemical differences. Young bones have a more spongy texture. The proportion of the compact to the cancellous element is smaller in the young than in the old. The specific gravity is also less. To determine this I took two radii. One was from a child about ten years of age, and was itself a fine illustration of incomplete fracture. Its specific gravity was 1.358; the second was from a man forty-five years of age, and its specific gravity was 1.429; while a section taken from the middle of an adult femur gave 1.600.

There is also a difference in the size and structure of the Haversian canals. As the bone grows, the lamellæ increase in number from the periphery inward until as many as fifteen rings may be counted. The calibre of the canals is therefore larger in young subjects than it is in the aged. It is proper also to state that in growing bones the Haversian interspaces are more abundant.

It is, I believe, owing to these facts, taken collectively, that young bones are permitted to bend when an older and a denser bone would snap.

[1] System of Surgery, Fifth Edition. Philadelphia, 1879.
[2] Report on Deformities after Fractures, Trans. Amer. Med. Assn., 1855-57.
[3] Medical Recorder, 1821.
[4] "Without any actual disruption except what may be interstitial and too trivial to be reckoned" (Hamilton: Deformities after Fractures, Trans. Amer. Med. Assn., vol. viii., p. 421).
[5] Gray's Anatomy, p. 51. Philadelphia, 1878.
[6] Dr. Stark: Edin. Med. & Surg. Journal, 1845.
[7] Human Osteology, p. 3. London: Luther Holden, 1878.

THE RELATIONSHIP BETWEEN DIPHTHERIA AND SCARLATINA.

By GEORGE T. WELCH, M.D.,

KEYPORT, N. J.

Most medical authors are at particular pains to controvert the opinion that scarlatina may be complicated with diphtheria, and strenuously oppose the clinical experience of independent observers with an array of arguments, which might become invincible if nature could be held in bonds by any charm of words. But not even the anatomist can map so accurately that some anomaly may not arise; while the pathologist constantly discovers the confusions attending upon the invasion of one disease into the territory of another. Medicine would become an easy art indeed, and every man would be his own doctor, if but one morbid ill could dispute with life at a time; but as Mary Magdalen was possessed of seven devils, so a crew of noisy complications in some diseases puts the wits to wrangle, and disturbs the judgment. It is certainly the duty of the teachers to simplify the study of morbid processes, to lop away the traditions, thin the redundancies, and let in all the daylight possible upon our science. But to contend that one disease alone hunts in an epidemic is manifestly absurd. And the gentlemen who deny the existence of diphtheria as a complication or sequela of scarlatina, or *vice versa*, readily admit that the former complicates measles, or that it deepens the malignancy of typhoid. Where is the consistency? What is more reasonable than that diphtheria should be awakened when the system is profoundly poisoned with scarlatina, especially since the latter insidiously ravages the same membranes? How seldom does a complication arise in any malignant disease until the invasion of certain vital structures invites the disease that usually preys upon that organ?

All the older writers acknowledged a relationship between the two diseases. In fact, while diphtheria has had an authentic history of two thousand years, scarlatina was never separated from it until within these last three centuries, nor given a name until Sydenham stood sponsor in 1676. We refine upon the ancients, but disease is a gross Caliban that constantly escapes his boundaries.

Let us see how some of the best authorities differ. Says Da Costa, "Diphtheria and scarlatina are certainly allied but not identical; for the poison of one leads to a cutaneous rash, and leaves a protective influence against a second attack; but often also deafness, suppuration of the glands of the neck, and dropsy—phenomena which are not encountered in the other. Moreover the exudation is not exactly similar in the two diseases. In scarlatina it is pultaceous and not coherent, and has no tendency to spread to the respiratory passages."

It is the observation of Squire, in "Reynolds's System of Medicine," that in diphtheria, while there is no diffused redness of the skin, sometimes little isolated red spots are discovered in different parts of the surface, and that the recurrence of the disease in the same individual, if it has been once fully formed, is by no means settled conclusively in the affirmative. Further he states that the albuminuria of diphtheria occasionally results in anasarca.

Mercatus mentions a rash in some of the Spanish epidemics of diphtheria, with redness of the whole face and neck. Fothergill describes a rash in the first edition of his treatise on the disease. Aitken, treating of anginose scarlet fever, declares the sore throat may be of a diphtheritic character.

Hartshorne tells us that occasionally paralysis is a sequela of scarlatina, and that the paraplegia may exist for several weeks or months. It is the opinion of Flint that in some severe cases of scarlatina anginosa the pharynx offers all the characters of diphtheritic inflammation. He observed, in consultation with Dr. Brady, of Brooklyn, a boy who had recently had diphtheria, now suffering with complete hemiplegia and general dropsy. After his convalescence his sister was attacked with scarlatina.

Professor Clark, in his lectures on Diphtheria, has given the details of a case in which that disease was held in abeyance during scarlatina and measles, these diseases following each other rapidly, when the diphtheria again appeared, and proved fatal.

Henoch, in his "Diseases of Children," vehemently denies the complication of diphtheria with scarlatina, but like an honorable observer, a page further on, records the autopsies of seven cases of scarlatina in which fibrinous infiltration of the pharynx descended to the larynx; and of two cases which showed upon post-mortem examination diphtheria of the pharynx, and in one, of the œsophagus also.

Dr. L. A. Smith presented to the Pathological Society of New York the pharynx of a child covered with true diphtheritic membrane, the little patient in life presenting characteristic symptoms of scarlatina.

To these latter I desire to add my own observations. April 30, 1882, I was called to see Frank T——, a lad of ten years of age, who had had scarlet fever in a light form two years before. He had soreness and stiffness of the throat, enlarged cervical glands, inflamed tonsils which filled the throat almost to suffocation, and with the pharynx and half-arches presented a glistening appearance as though coated with varnish. May 1st, the right tonsil had at the centre a yellowish white spot which increased gradually in size, the next day appearing on the left tonsil, and subsequently upon the uvula, velum, base of the tongue and roof of the mouth, and into the nasal passages, accompanied by symptoms of suffocation and impending dissolution dreadful to behold. May 6th, the exudation began to be detached, and by the 8th the whole of the affected portions of the throat were cleared of the diphtheritic membrane, and, despite relapses, the patient finally made a good recovery. So tenacious was this membrane that sometimes, being dislodged from the throat, it would adhere to the roof of the mouth with such persistency that the boy would find difficulty in scraping it off with his fingers. Albuminuria occurred during the progress of the disease. There were no sequelæ.

May 2d.—Joseph L——, an infant of sixteen months, in this family, was attacked with scarlet fever, the efflorescence being diffused generally over the whole surface. May 5th, the eruption subsided, when diphtheria supervened, the tonsils being rapidly covered with the tenacious exudation, which extended both upward and downward, the larynx becoming involved, and the patient dying on the 8th.

On May 6th and 7th, two other children in this family were attacked with severe scarlet fever, without special throat symptoms.

For some months subsequently isolated cases of scarlet fever would appear in families a distance from each other, and in December two cases of diphtheria occurred in a family three miles from Keyport. A child of this family, convalescing from a light attack, conveyed the disease to a little girl of three years in a neighboring family. Five persons were attacked in this family, an infant of twelve months dying from the disease. Paralysis was a sequela in two of the cases. Other attacks of diphtheria appeared in this neighborhood, and scarlatina occurred at the same time in town.

On January 22, 1883, I was called to see a son of Z—— C——, aged twelve, who passed through all the stages of a mild attack of scarlet fever. On the 28th, his two little sisters, Sarah and Grace, two and four years of age, were attacked with the fever. February 5th, Grace was prostrated with virulent symptoms of diphtheria, which extended into the nasal passages, the thin, acrid discharge from which excoriated the upper lip, and acting as a centre of infection, the whole face became involved in a revolting eczematous eruption, which was with great difficulty subdued. Complete paraplegia resulted during convalescence, the child toppling over whenever raised upon her feet, and finally dragging herself by her hands and arms in a sitting posture about the floor. She recovered completely by the end of April.

On February 5th, another sister, Annie, aged ten, was prostrated with severe scarlatina, which began to subside on the fifth day. February 12th she was attacked with diphtheria. On the 16th, false membrane of considerable density was expectorated. Regurgitation of liquids and nasal tone of voice were persistent for some time afterward. In the third week rheumatism of all the large joints occurred, and desquamation, which had been deferred, now began.

On February 11th, I visited Geo. A. F——, ten and one half years of age, who had been ill since the day before. I was struck with the intolerable fetor of his breath as soon as I entered the room. His skin was glowing with the characteristic eruption of scarlet fever. On the succeeding day the brain expended itself in a fury of active delirium. The body roasted at a dull heat. The stiffened jaws would scarcely permit an examination within, but an ash-colored, parchment-like exudation was plainly discovered. February 13th, nasal passages occluded, voice hoarse and inarticulate. February 15th, membrane began to loosen, the edges looking like the frayed finger of a leathern glove. Large pieces, still tough, having the mould of the glottis, were drawn from the throat on a sponge probang. These adhered to the skin like collodion. Upper lip excoriated. Virulent sores were grouped about the alæ of the nose. The conjunctivæ became granulated and covered with an ash-colored deposit. In the meantime the rash had not faded from the body. Death occurred on the seventh day of the disease.

February 15th.—Frank F——, aged nine, was attacked with scarlet fever, and made a good recovery, without any notable departure in the type. C——, an infant of seven months, in this family, was attacked on February 27th with diphtheria of the most malignant form, speedily investing the larynx and causing death on the fifth day. A small ulcer on the face was covered with diphtheritic deposit. The mother had a mild attack of this disease about the same time.

February 15th.—I was called to see Mrs. S. D. C——, a stout, florid lady of forty, who was almost in a state of suffocation. Voice indistinct; liquids regurgitated through the nose. An ash-colored diphtheritic membrane invaded all parts of the throat that could be seen, even extending to the base of the tongue, and upward into the nares, the neck brawny, the pulse swift, the temperature exalted. There was no hopeful presage among all the symptoms. Ice was used in abundance within and without the throat; large doses of perchloride of iron frequently exhibited in milk, though swallowed with increasing difficulty; rectal alimentation, wine, lime-water sprayed in the throat; the room filled with an atmosphere of steam. On the third day there was an evident tendency to softening of the membrane, its edges loosening and having the appearance of old wash-leather, but the patient was alarmingly near death, too. A solution of perchloride of iron was used with an atomizer in the throat, and then twisting about in the latter a sponge probang dipped in the perchloride in glycerine. To my great relief a large piece of membrane was detached. It now broke down rapidly under the use of the atomizer, and enough more was withdrawn to afford sensible relief from impending death. The patient was making a fitful and tardy recovery, when, on the tenth day my attention was called by the nurse to a

scarlet efflorescence which, by the afternoon, covered the face, neck, shoulders, arms and chest, and to a milder degree, other portions of the trunk and limbs. Desquamation occurred a few days later. There was incomplete paraplegia in the third week, which caused great stiffness in locomotion for some time after. Extensive sloughing of the uvula, with severe ulceration of the pharynx followed the loosening and disappearance of the diphtheritic membrane.

At the same time that I visited Mrs. C——, I found her eldest daughter, Lida, aged fourteen, prostrated in another room with severe scarlatina, and one week later, Annie, aged three, was attacked with the same disease.

March 14th, Nellie V-——, an infant aged eighteen months, was prostrated with severe scarlatina. On the 20th the efflorescence had disappeared at my morning call, but being hastily summoned in the evening, I found alarming symptoms of diphtheria had suddenly developed. On the 21st the inflamed tonsils had nearly closed all aperture between, and a glistening membrane invaded all the parts to be seen. Successive layers of this appeared in the throat. March 25th, after a series of dark days that lengthened despair to the family, the membrane began to decay. The upper portion broke short off under the use of the probang, like a fracture of maccaroni, showing three successive layers of membrane. A most fetid air arose from the mouth. Membrane was expelled from the nostrils; the excoriation of the lip was very severe. A piece of membrane, moulded to the circumference of the throat, was loosened by coughing and removed with the probang. Dr. Arrowsmith, who kindly visited the patient in the afternoon and the succeeding three days, during a short illness I had, reported that at his first visit he distinctly observed the succession of layers of membrane in the throat, and brought away moderately large pieces on the probang, the child being too exhausted to assist in relieving itself. April 4th the skin began to exfoliate. An abscess of large size developed over the larynx. Paraplegia occurred later, with seeming anæsthesia of the skin, and inability to pass urine at will. The anæsthesia was inferred from the great coolness of the skin, and the child's evident desire to be warmly wrapped and held near the fire. Though previously active in walking and running, it was not able to stand alone until May 4th. During the progress of the diseases named, I met in other families scarlatina, and in others diphtheria, which did not present any of the remarkable symptoms detailed.

These cases go far to prove a relationship between diphtheria and scarlatina, even if they do not show that there is but one disease here, preying upon life under dual names, like a villain of many aliases.

Might it not be the same disease we call scarlatina when the symptoms are mild and the effloresence well developed? scarlatina anginosa when the eruption is obscure and the throat direfully inflamed, with pultaceous deposits on tonsils and pharynx? diphtheria when the deposit is organized and extending above and below with frightful impetuosity?

There is a tribe of Kurds in Caucasus who dare not call the devil by his right name, and so the diagnosticians labor to prove a distinction whenever a difficulty arises. But your writer of pure diagnosis, I take it, is like the lexicographer who compiles from all known sources and makes an average of opinions and judgment, and like him, is forever changing his standard where the ground is disputed, for opinions vary with their sources and judgment is not infallible.

Truly the lists are not closed here, and no man should trust to the books when nature opens to him a dreadful page which he may read as well as another.

It is to this end I have offered the foregoing clinical notes as a contribution to the further study of the identity of diphtheria and scarlatina, for I am impressed with the futility of setting up fast boundaries to these morbid processes. The action of the morbific principle in the two diseases (if they be two diseases) is so very variable in different epidemics, and in different individuals in the same epidemic, that no reliable average can be gathered from the experience of one generation, but, like the philosophy of many other scientific problems, it must be left to some wiser future.

THE TREATMENT OF SPORADIC CHOLERA.

By J. M. FRENCH, M.D.,

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My note-book contains the analysis of twenty-five cases of cholera morbus, occurring during the past three years, in which three different modes of treatment were employed. The cases were of various degrees of severity, some mild and some extremely severe, but all characterized by vomiting and purging, with more or less prostration.

The first plan of treatment consisted in the administration of pepsine, bismuth, alkalies, opiates, and stimulants, by the mouth, with which was frequently combined the application of sinapisms and hot fomentations externally.

The second plan was by means of the rectal injection of starch and laudanum, thirty drops of laudanum being a medium dose; and with this were combined any measures of the first class which might seem desirable.

The third plan consisted in the hypodermic injection of the sulphate of morphia, one-fourth of a grain being the ordinary dose. It was usually unaccompanied by any other treatment.

The results can best be seen by a brief review of the cases:

Case I.—Mrs. H. S——; September, 1880; very severe; oral and external measures entirely without avail; great prostration; fatal result feared; the rectal injection of starch and laudanum proved promptly successful, and needed but one repetition.

Case II.—Mr. W. K——; July, 1881; moderately severe; oral remedies successful.

Case III.—Mrs. H——; August, 1881; moderately severe; oral remedies successful.

Case IV.—Miss A. M——; August, 1881; mild; oral remedies successful.

Case V.—Mrs. L. R——; September, 1881; quite severe; rectal injections promptly successful.

Case VI.—Mrs. C——; September, 1881; very severe; oral remedies ineffectual; rectal injections speedily successful.

Case VII.—Mr. M. K——; September, 1881; moderately severe; rectal injections successful.

Case VIII—Mr. McC——; October, 1881; moderately severe; rectal injection retained but a short time, and required supplementing by oral and external measures, administered by the nurse, owing to my absence.

Case IX.—Mr. A. W——; August, 1882; moderately severe; oral measures slowly successful.

Case X.—Mrs. A. W——; August, 1882; moderately severe; oral remedies slowly successful.

Case XI.—Mrs. O. W——; August, 1882; moderately severe; oral remedies slowly successful.

Case XII.—Miss E. G——; August, 1882; mild; oral and external remedies successful.

Case XIII.—Miss M. P——; August, 1882; mild; oral measures successful.

Case XIV.—Mr. T. F——; August, 1882; very severe; rectal injection promptly successful, and no repetition needed.

Case XV.—Mr. C. M——; August, 1882; very severe; a strong man; not seen until he was greatly prostrated—the disease not checked; hypodermic injection of one-fourth grain morphia promptly successful, and no repetition needed.

Case XVI.—Mr. J. S——; August, 1882; moderately severe; rectal injection administered, and repeated; lowly successful; combined with oral measures.

CASE XVII.—Mr. C. C——; August, 1882; very severe and greatly prostrated; hypodermic injection promptly successful.

CASE XVIII.—Mrs. K——; August, 1882; severe; rectal injection rejected, repeated, and fully successful.

CASE XIX.—Mr. C. B. S——; August, 1882; moderately severe; hypodermic injection successful.

CASE XX.—Mr. P. C——; August, 1882; mild, because seen early; hypodermic injection promptly successful.

CASE XXI.—Mrs. C——; August, 1882; moderate; oral measures slowly successful.

CASE XXII.—Mr. P. O'N——; August, 1882; sudden and severe attack, with great prostration; being close at hand, I gave a hypodermic injection, and prescribed strict quiet, as in other cases; promptly successful, no other treatment needed.

CASE XXIII.—Mrs. G. F——; September, 1882; moderate oral measures failed; hypodermic injections promptly successful.

CASE XXIV.—Mr. G. V——; September, 1882; quite severe; hypodermic injection promptly successful.

CASE XXV.—Mrs. F——; October, 1882; severe and exhausting, requiring constant care; hypodermic measures and all opiates refrained from, on account of previous ill effects of morphia; oral and external measures slowly successful.

Summary.—Mild cases, 4; moderately severe, 12; very severe, 9. Cases treated by oral and external measures only, 10; by rectal injections, 8; by hypodermic injections, 7.

Conclusions.—The first plan of treatment is only adapted to mild and moderate cases, or those which have safely passed the acute stage, as in severe cases no medicine can be retained on the stomach. At best, this plan requires constant watching, and failures are frequent.

The second plan is much more effective, but is liable to need several repetitions on account of inability to retain the injection until absorbed. If not promptly successful patients are apt to lose faith in it, and often object to its repetition. Hence, it is not fully satisfactory.

The third plan is speedy, certain, satisfactory. Except in those cases where all opiates are dangerous, it is also perfectly safe if properly administered. Very seldom does it need repetition. If taken early, it is the only treatment needed. On the whole, I consider the hypodermic injection of morphia as nearly a specific for cholera morbus as anything in medicine.

PUERPERAL ECLAMPSIA.—Dr. Burton, in the *Medical Press and Circular*, May 30, 1883, says: 1. That puerperal eclampsia is a motor neurosis associated with loss of consciousness. 2. That it stands in intimate relationship to the convulsions of childhood and to epilepsy, 3. That only one factor in its production is constant, viz., a peculiar condition of the nervous system that may be designated as one of "unstable equilibrium," and that this factor is common also to the convulsions of childhood and to epilepsy. 4. That retention of urinary constituents when present vastly increases the tendency to convulsions in pregnancy, but that outside the conditions of pregnancy and childhood such retention is but rarely the cause of convulsions. 5. That nerve-irritation—shock, emotion, violent pain, uræmic or other morbid condition of blood, etc.—is capable of setting up sudden vasomotor spasm of cerebral blood-vessels. 6. That this spasm of blood-vessels, causing sudden anæmia of the brain, is the cause of the convulsions and of the consequent coma. This view of the etiology of puerperal convulsions leads naturally to the treatment, and in fact furnishes an explanation of the success that has attended the employment of chloroform, ether, chloral, bromide of potassium, subcutaneous injection of morphia, and blood-letting.

Reports of Hospitals.

ST. LUKE'S HOSPITAL, NEW YORK.

(Reported by HENRY MOFFAT, M.D., House Physician.)

A CASE OF DIABETIC COMA WITH ACETONÆMIA.

So much has been written of late in the various medical periodicals upon the pathology and clinical history of this somewhat unusual condition, and so little can be found in explanation of it in the standard works on practice that I have been led to think that a case as typical as the following will not be without interest to the profession at large.

As condensed from my notes the case is as follows: George A. C——, aged nine years, admitted September 9, 1882. Family history negative. Patient was perfectly well till January, 1882, when it was first noticed that he had nocturnal incontinence of urine. At the same time the daily quantity of urine passed began to increase. This increase became gradually more and more marked, his appetite became ravenous, thirst unquenchable, and he soon developed all the well-marked constitutional symptoms of diabetes mellitus.

On admission he was anæmic and emaciated. Upon his forehead was the cicatrix of a wound received when about two years of age. (No history of any cerebral symptoms following this wound.) He was passing one hundred and eighty ounces of urine daily. Examination showed specific gravity 1.044, acid. No albumen and no casts. Sugar, thirty-two grains to the ounce.

Patient was put upon diabetic diet, and treated with strychnia sulp. gr. $\frac{1}{60}$, and later with the bromides. Under the latter treatment he seemed to be gradually improving, and by January 28, 1883, was passing only sixty ounces of urine, with seventeen grains of sugar to the ounce.

February 11th.—Without any known cause patient began to complain of pain in abdomen, and soon became drowsy and sleepy, and when seen at 6.30 A.M. his respiration was rapid but deep; pulse rapid and somewhat feeble. He could be roused, and spoke continually of his abdominal pain. 9.30 A.M.: Pulse, 146; respiration, 36; temperature, 99°. Surface warm and dry; pupils normal and react to light; no cyanosis; patient completely comatose; the respiration was very deep and full, the whole chest expanding well.

Examination of urine passed at this time—specific gravity 1.034; acid; trace of albumen; sugar, 3.45 grains to the ounce. With ferric chloride it gave the dark wine-colored reaction supposed to be due to the presence of "acetone." At 11 A.M. patient was seen by the attending physician, Dr. G. G. Wheelock, and the diagnosis of acetonæmia confirmed.

Patient remained in this condition for twenty-six hours, when he died. There were no distinct convulsions, but just before death a slight twitching of the hands and face.

At the autopsy, performed by Dr. F. Furguson, nothing abnormal could be detected by the naked eye either in the brain, spinal cord, or any of the viscera.

Since then, however, the doctor has very kindly furnished me with the following microscopical report:

"The kidneys are slightly anæmic—the epithelium lining the tubules in the cortex is cloudy, fatty in places. There are a *large number* of *fatty emboli* in the *vessels* of the kidney extending into the capillaries of some of the Malpighian tufts. There are numerous *fatty emboli* in the vessels of the lungs. The lungs in other respects are normal. There is a very small amount of fat in the liver, evenly diffused throughout the organ and pigment of the hepatic cells around the central vessels. The heart-fibre contains considerable pigment—the organ in other respects normal."

Upon reviewing the case there are a few points I would wish to emphasize.

1. The coma occurred in a case which was *not* acute, but seemingly improving in every way. In this it differs from the case observed by Drs. Foster and Saundby,[1] who conclude that this condition is more apt to occur in acute cases.

2. There was a marked diminution in the amount of sugar in the urine during the coma.

3. The discovery by Dr. Furguson of fat emboli in the vessels of the kidney and lungs is of interest as bearing upon the mooted question of the lipæmic origin of the coma. There was, however, no evidence of marked pulmonary obstruction, nor any congestion of the meninges or substance of the brain. (See *Edinburgh Medical Journal*, September, 1882.)

4. We cannot close without referring to the peculiarity of the respiration. When once seen it can never be mistaken. It was rapid but very deep; the whole chest being fully expanded, but seemingly no relief to the dyspnœa.

Progress of Medical Science.

A Case of Movable Kidney fixed by Operation.—The patient, a married woman, aged twenty-seven, had for three years suffered much from pain and sensation of weight and dragging in the right hypochondriac and iliac regions, increased by walking and exertion, gastric catarrh, and habitual constipation. A movable tumor was found, and clearly made out to be the kidney. As no kind of treatment or support afforded any relief, an operation was determined on. Anæsthesia was produced by bichloride of methylene, and all antiseptic precautions were followed. The patient placed on the left side, an incision, about sixteen or eighteen centimetres long, was made in the right lumbar region along the external border of the sacro-lumbar muscular mass, extending from the last intercostal space to the crest of the ilium. On cutting carefully through the parietes, the circumrenal fatty connective tissue was reached. The kidney was not *in situ*, but could be felt through the abdominal wall in the iliac fossa. An assistant pushed it up with his hand and kept it in position, while the operator, breaking through the fatty connective tissue, easily discovered the convex border and the greater part of the posterior surface. The first suture was put in the convex border; the needle traversed the fibrous capsule of the kidney. The circumrenal fatty connective tissue was raised and drawn into the wound, through the tissues of the wound directly under the lower edge of the last rib, and again through the circumrenal connective tissue. A second suture was applied on the posterior surface of the kidney, and in the deep tissues of the posterior lip of the wound. A third suture was placed in the same way in the anterior surface of the kidney, at the convex border and the deep structures of the anterior margin of the wound. With these three sutures the kidney was held in position. For greater security, the circumrenal fatty connective tissue of the lower half of the kidney was united by four sutures to the tissues of the wound. Catgut sutures were used. A large drainage-tube was applied deeply, and a small one superficially, and the wound was sewed up with seven points of deep sutures and twelve superficial. The patient bore the operation well, and her subsequent course was satisfactory. There was no fever, and the urine remained normal. The wound was dressed on the fourth day, and the drainage-tubes were removed. On the ninth day it was dressed for the second time. Cicatrization was complete; the superficial sutures were removed. On the twentieth day the patient was discharged cured. She has lost all her former pains, is perfectly well, and the kidney can be felt in its normal situation.—*London Medical Record*, May 15, 1883.

[1] Birmingham Medical Review, January, 1883.

Derangement of the Muscular Sense in Cerebral Disease.—In a recent lecture (*Wiener Medizin. Blätter*, March 1, 1883) Professor Nothnagel made some general remarks on the derangement of the muscular sense in cerebral disease. The muscular sense is disordered in the following circumstances: 1. When patients cannot distinguish between weights. 2. When they have no idea of the position of their limbs, and are unable to imitate with one limb a movement which has been made passively with the other. 3. When ataxic symptoms are present, *i.e.*, when the gait is staggering, or when the patient cannot use the upper extremities for such movements as putting in a button. The symptoms point to morbid processes in the cerebellum, corpora quadrigemina, pons varolii, thalamus opticus, centrum ovale, or cortical substance. In the cerebellum the affection is not of the hemispheres, but of the vermis, and Nothnagel is inclined to think only the deeper part of the vermis; but more exact knowledge on this point is wanted. Sideward inclination comes on when the crus cerebelli is injured. In the corpora quadrigemina, the seat of lesion seems to be the posterior pair; in the pons, we know that the injury must be near the centre, but the exact spot has not been discovered. Our experience as regards the optic thalamus is very slight; one case has been observed by Hughlings Jackson where weights could not be distinguished, and Flourens believes from his experiments that the position of the limbs is not known. There is not much to say of the centrum ovale, and in the cortical substance the central evolution is now supposed to be the seat of injury, instead of the parietal, as formerly; and the more superficial the injury is, the more will the muscular sense, and not the motility, be disturbed. Clinically, both extremities are affected when the lesion is in the pons varolii or cerebellum, whilst in affections of the cortical substance the muscular sense is disturbed only on one side. Staggering gait seems to occur in connection with dizziness. In cortical lesions weights cannot be distinguished, but the ataxic gait is seldom seen. In some cases of injury to the pons co-ordination only was disturbed; in others the muscular sense also.

Enchondroma of both Lungs with Secondary Growth in Brain.—Dr. Churton, in the *Lancet*, March, 1883, gives notes of the case of a girl, aged eighteen, who came under his observation for shortness of breath and severe cough. The left leg had been amputated four years previously, but the exact nature of the disease was not ascertained. There had been wasting for sixteen months before she came under Dr. Churton. On examination, there were the usual signs of effusion on the right side of the chest, and subsequently several ounces of blood-stained fluid were removed by the aspirator. After two or three weeks of frequent headache and vomiting, twitchings of the left arm and hand were noticed; and after this patient had fits at intervals, remaining unconscious for an hour or more. The patient gradually became worse, and died about two months after her admission. The post-mortem examination showed a hard, bony growth of the lower part of the right lung, with scattered nodules through the anterior part, and also in the left lung. In the substance of the right cerebrum was a growth weighing nine drachms, which on examination proved to be ordinary osteo-enchondroma.

The Picric Acid Test for Albumen.—Dr. Johnson, *British Medical Journal*, May 7, 1883, gives the following additional details concerning this test:

It should always be borne in mind that, in testing for albumen, the picric acid must be in excess. A few drops of a saturated solution of picric acid in a highly albuminous specimen will form a coagulum, which is quickly redissolved. When urine contains much albumen it should be mixed with its own volume of the picric acid solution; and in testing a fresh specimen, it is better to begin by adding an equal volume of the test liquid.

One difference between picric acid and nitric acid as tests for albumen is, that whereas an excess of nitric acid, especially when the urine is heated, will entirely redissolve the previously precipitated albumen, no excess of picric acid will redissolve the precipitate which it has once found in an albuminous solution. Picric acid solution on the surface of the urine is applicable only for the detection of a minute trace of albumen. For this purpose he advises that a column of urine four inches in height should be poured into a six-inch test-tube, and upon this one inch of the picric acid solution. The result is that the upper layer of the urine is mixed with about its own volume of the test liquid; and if albumen is present, the stained portion of the urine is instantly rendered more or less opalescent, and thus contrasts with the unstained and transparent urine below. If the picric acid solution were allowed to flow so gently on to the surface of the urine as merely to come in contact and not to become mixed with its upper portion, the albumen, if present, would not be detected, or it would be indicated only after an interval of some minutes, when the two liquids had become mixed by slow diffusion. There must be an actual mixture in about equal proportions, and not merely contact of the two liquids, to ensure the action of the test.

The slight opalescence caused by the picric acid solution in a sample of urine which contains a mere trace of albumen is always increased by the application of heat. So that if the flame of a spirit-lamp be applied to the upper part of the opalescent column, this will become more opaque than the lower part, which had not been exposed to heat. He now invariably applies heat to a specimen of urine, which has been rendered opaque, or more or less coagulated, by picric acid. His chief reason for this practice is to ascertain if peptones ever appear in the urine. In a paper published in the *Journal*, March 31st, he has shown that, whereas the albuminous precipitate with picric acid is rendered more opaque and coherent by heat, the precipitate which picric acid gives with peptones is entirely redissolved by heat considerably below the boiling-point.

The microscope alone would serve to distinguish the precipitate caused by picric acid with peptones, with urates, and with albumen respectively. The precipitate recently thrown down with artificially prepared peptones appears under the microscope quite homogeneous, and free from solid particles; but when the precipitate having been dissolved by heat, reforms on cooling, it seems to consist of numerous very minute, apparently globular particles, in which the so-called "Brunonian movement" is very active. The microscopic appearances of uric acid and urates are so well known as to need no description.

The precipitate produced by picric acid with albumen presents irregular clusters of granular material, which appear much larger and more opaque after the application of heat. According to his experience, a deposit of uric acid and urates is about as rare a result of adding picric acid to urine as a similar deposit caused by nitric acid; and hitherto he has met with no specimen of urine in which the presence of peptones has been indicated. A deposit thrown down by picric acid and redissolved by heat, may pretty safely be assumed to consist of urates, but in any case of doubt the addition of Fehling's solution and the microscopic appearances will at once serve to distinguish between precipitated peptones and urates.

Dysentery and Liver Abscess.—In a paper on the relation of hepatic abscess to dysentery, Sir J. Fayrer (*Lancet*, May 19, 1883) summarizes his opinions as follows: 1. The so-called abscesses which originate in local deaths of parenchyma (pyæmia, embolic deposits, or infarcts) are cavities varying in size from a mere speck to an orange, containing débris, sanies, puriform matter, leucocytes, and, finally, pus. They are seen in various stages of development, and are not necessarily confined to the liver, but occur in other viscera or regions of the body. These are truly pyæmic. 2. There is a form of liver abscess co-existent with, and perhaps due to, dysentery, which is the result of direct absorption and transference of pus or septic matter from the bowel to the liver through the mesenteric veins. Such may be solitary, double, or triple. This is also a very dangerous form of the disease, though not necessarily fatal, as it is feared must always be the case in the former variety. 3. Dysentery, malarial fever, and hepatitis may co-exist, or supervene on each other as effects of common climatic cause; it seems natural to ascribe the liver abscess in such cases to the dysentery, but it is probable that they are rather coincidences than consequences of each other, and that the cause which affects the glandular structures of the large intestine may determine the mischief in the liver in certain climates and localities; such are obviously very different from those previously mentioned. 4. The ordinary large and most frequently single tropical abscess is quite independent of dysentery, though it may co-exist with or follow it. Each or all of these forms may, in England, be the result of disease originally contracted in certain climates.

The Nitrous Compounds in Angina Pectoris.—Dr. Hay has instituted a series of experimental observations touching the value of nitric, nitrous, and nitro-compounds in angina pectoris (*The Practitioner*, May, 1883). He concludes therefrom that nitrous acid in any combination, whether as an ether or a metallic salt, is useful in the treatment of angina pectoris; and that, in the case of the nitrite of amyl, the action of the acid is aided by that of the base. On the other hand, all compounds of nitric acid, whether ethereal or metallic, are without effect, unless it so happen that the constitution of the nitrate is such that it decomposes in the body with the liberation of nitrous acid. Further, nitro-substitution compounds have likewise no remedial effect. So far as at present known, the nitrogen-containing remedies for angina pectoris may be divided into two classes, the one consisting of combinations of nitrous acid with metallic oxides or alcoholic radicals, the other comprising a peculiar class of nitric ethers, obtained from the higher alcohols, whose decomposition within the body results in the production of nitrous acid. In both classes the action of the compound is ultimately dependent on the nitrous acid present. Typical examples of the first class are nitrite of sodium and nitrite of ethyl, and, of the second class, nitro-glycerine. To these classes might be added another containing such substances as compounds of amyl, whose action is similar to that of nitrites. But, limited as this group at present is to compounds of amyl, it is not one to be chosen in the treatment of angina pectoris. The dose required is large, and the action is not rapidly produced, and disagreeable after-effects are apt to occur; and altogether I am very doubtful of its always acting so well as it did in the case of my patient.

Changes in the Cardiac Nerves in Heart Disease.—From a number of examinations of hypertrophied hearts with valvular lesions, Dr. Putjatin (*Virchow's Archiv.*) concludes that: 1. In chronic affections the nerve-ganglia are affected by an encroachment of the inflammatory process. 2. In cases of early and relatively slight disease the changes are restricted to hyperæmia and granular degeneration. In chronic and extensive affection of the heart there are evidences of interstitial inflammation with the production of fine connective tissue, while the ganglion cells themselves present appearances of fatty and pigmentary degeneration. In one case there was entire destruction of the ganglion cells, with calcification of the tissue between them. 3. Aside from local trouble in the heart and aorta, changes in the ganglia may be called forth by chronic constitutional disease. 4. The above described lesions cannot be without influence on the physiological activity of the heart. In this way many of the functional disturbances

and even paralysis of the heart, when fatty degeneration is not present, can be explained. Possibly, also, some forms of angina are referable to the same cause.

Uskow has also studied the nerves of the heart, in cases of hypertrophy combined with chronic interstitial nephritis (*Virchow's Archiv*). He has found that with the growth of muscular tissue the medullary sheath of the nerves is lost, and a process of nuclear proliferation commences. Should an acute disease supervene, then the changes in the affected nerves assume the character of an acute parenchymatous inflammation. In the nerve-cells lying in the course of the fibres, as well as those in the ganglia of the septum atriorum, the changes were confined to thickening of the capsule and increase of nuclei. The protoplasm itself was unaffected.

The Rapidity of Cerebral Acts.—Dr. René has made a series of experiments on the rapidity of transmission of impulses through nerves, and the rapidity with which cerebral acts are performed. He finds (*Gaillard's Journal*) that the intensity of the stimulus has a direct influence on the rapidity of nervous transmission. The stronger the stimulus the more rapid the transmission. The rate of transmission cannot, therefore, be stated in exact terms, since it is relative, as has been not unfrequently noted for other kinds of cellular activity. He has also confirmed the fact, now very generally admitted, that it is impossible to measure the rapidity of transmission in sensory nerves by stimulating different points of their length, for the rapidity of the response is not proportionate to the length of the nerve traversed. Thus the response to a stimulus applied to the finger is often made with a shorter interval of time than a stimulus applied to the elbow or to the shoulder, though the length of nerve called into play is much greater in one case than in the other. In a word, it is impossible to compare the results obtained from different regions. The most exact method of measuring nervous transmission appears to be that of response to an auditory stimulus. The rapidity with which nervous impulses are here conducted he estimates at twenty-eight metres per second, which is a little lower than the number obtained by other physiologists. For the rapidity of transmission of motor impulses René gives twenty metres per second, which is below that of other experimenters. The duration of a cerebral act he estimates at $\frac{35}{1000}$ second. In young infants the duration is more considerable, amounting to 0.090 second. The duration of a reflex act—that is to say, the time occupied by the entire reflex arc, sensation, transmission to the cord, including motor impulse and muscular movement—is 0.15 second.

Cerebral Vacuolation.—At a recent meeting of the London Pathological Society (*British Medical Journal*, May 17, 1883) Dr. White read a paper, written conjointly by Dr. Savage and himself, on vacuolation of the cerebral substance. It was shown that there were nine causes for holes in the brain: 1. Small processes of sclerosed meninges, in cases of general paralysis, dipped into and excavated minute portions of cerebral tissue. 2. In the same disease the sclerosed neuroglia, by its contraction, might give rise to small cavities. 3. There might be multiple hydatids in the brain. These three conditions were very rare, the authors having no knowledge of the second, while the third was almost confined to animals suffering from staggers. Several references to continental authors were given, while the relation of the muslin appearance to the second of the above was pointed out. 4. The fourth cause was the dilatation of cerebral vessels giving rise to the "*état criblé*. It was particularly emphasized that this was, in the majority of cases, of no pathological significance. 5. Shrinking of the cerebral convolutions in some cases gave rise to holes in the subjacent cerebral substance; a very good example of this condition was exhibited. 6. Miliary aneurisms, as Charcot had pointed out, might give rise to holes in the brain-substance; some very marked specimens showing this were exhibited. 7. In the condition known in Germany as *die Porencephalie*, a large gap existed in the brain-substance; this might communicate either with the exterior or the interior of the brain, or both. 8. The Gruyére cheese condition. This, it was pointed out, was quite different from the *état criblé*, for it was due to a dilatation of the perivascular lymphatic space of His. Of the causes of this dilatation nothing was known; probably they were local, and the dilatation was saccular. The authors showed an example of this condition in which the whole of the brain, except the lower part of the medulla, was riddled with cavities exactly like those found in cheese, and microscopic specimens exhibited showed that these holes were produced by this perivascular dilatation. The shape and direction of the cavities also corresponded with that of the vessels. Very few examples of this condition had been carefully described; in England only one, by Lockhart Clarke, who referred it to the same cause. 9. The authors showed specimens from two remarkable cases, in which the kidneys, lungs, liver, heart, and brain all contained holes; in the kidney, these cysts were due to the dilatation of either the tubules or Malpighian capsules; in the liver they were due to the vacuolation of the hepatic cells; in the lungs and brain it was impossible to come to any definite conclusion as to their origin, but in both these viscera the cavities contained a peculiar material, staining deeply with logwood; both the subjects were lunatics. Cases in which there were found only a few holes, such as patches of softening hemorrhage, were not considered to come within the scope of the paper. Dr. Savage said that, in the cases of the two lunatics last referred to, the changes were certainly not due to changes produced by preservative fluids after death, as the vacuolation was noticed at the necropsy. Both the patients were general paralytics, but in one the disease was chronic (three or four years), in the other acute (three or four months). He was convinced that the vacuolation occurred under various conditions.

The Local Origin of Malignant Growths.—Mr. Jonathan Hutchinson, in the *British Medical Journal*, March, 1883, contributes a paper on the nature and scope of the local influences which induce malignant action. "The more we investigate, the more clearly will we see that all inflammations are really infective, and that inflammatory processes may pass by almost insensible gradations into those of malignancy." It is not so much senility of the entire organism as local senility (an old age of the tissues concerned, which is premature, and does not correspond with that of the body as a whole) that is almost always necessary to the production of cancer, exceptions occurring, however, in cases due to the influence of inheritance. Tissues and organs which are just passing out of use are those most prone to develop cancer. As to the inheritance of cancer, it has been urged that a disease which is capable of inheritance must be a constitutional one. This is true to some extent; but Mr. Hutchinson says that a peculiarity of cell-structure generally is inherited, not germs, not a blood-malady, but a special type of cell-organization, permitting with greater ease than in other persons the injurious influences of local causes. The rodent ulcer of the face is looked upon by the author as a form of morbid action which stands half way between common inflammation and cancer. There is also a distinct proneness possessed by parts formerly affected by syphilitic inflammation to become affected by some malignant growth. In conclusion, Mr. Hutchinson urges the adoption of his doctrine of a pre-cancerous stage, where surgical interference is necessary and ought to be insisted on, before the growth takes on any definite form except that resembling ordinary inflammation, and before the neighboring lymphatics are affected. Without this, he sees no hope of any improvement in the reduction of the mortality of cancer.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, July 7, 1883.

THE INSANITY OF EPILEPSY.

IN the study of epileptic insanity we find much to justify the view of the pathogeny of the falling sickness propounded by Hughlings Jackson, namely, that the epilepsies are dependent on excessive paroxysmal discharge of some part of the cerebral cortex.[1] Not to dwell on the fact that the initial symptom of the "grand mal" may properly be designated as a paroxysmal affection of consciousness, and that light seizures of the "petit mal" are constituted by abrupt temporary suspension of the conscious mental life; that epileptic attacks often begin with some strong mental emotion as fear, or anger, exhibitions of irascibility or peevishness of hours' or days' duration, forcing upon us the irresistible inference that, if the fit begins in the intellectual sphere, and consequently in the gray matter of the hemispheres, the succeeding physical processes must begin in the supreme cortical motor centres, between which and the psychical centres there is both contiguity and histological solidarity. The truth has often been pointed out that the sensory, intellectual, and motor phenomena of epilepsy are interchangeable, and that an attack of mania may take the place of the ordinary convulsive paroxysm, the derangements displaying themselves in convulsions, not of the muscles but of mind, to use Maudsley's expression.

"The physical process, in a fit beginning by loss of consciousness, is a discharge beginning in some of the nervous arrangements in the highest centres of the brain" (Hughlings Jackson). This view, which is generally accepted by those who believe in the modern doctrine of localizations, explains all the phenomena of the fit and their order of occurrence much better than the older theory, which finds the point of departure of the paroxysm in excitation of the medulla oblongata.

A remarkable example of the *furor epilepticus* taking the place of the customary convulsive seizure, constituting what is known as *masked epilepsy*, is given by Jules Falret in the *Archives Gén. de Médecine.* "François L——, shoemaker, was for many years subject to epileptic fits. The attacks, which at first were followed by but slight alteration of the reason, became more serious and were accompanied by furious mania. Sometimes the fit was replaced by homicidal delirium, as in the following instance: When he was through with his military service (he had been a soldier) he returned home and decided to marry. The ceremony was fixed for October 26, 1841. The 24th an intense headache came on and seemed to him to betoken an impending attack. He called a physician who had formerly treated him for the disease, and demanded to be bled, an operation which had always given him relief. The physician refused to gratify his request. The 26th, some hours before the wedding, he was bled by another physician, but without any diminution of the pain. During the marriage ceremony François was dejected and taciturn; he said nothing but the one word *yes.* On quitting the church he was seized with a most atrocious pain in the head, and when he arrived at the house of his father-in-law he was obliged to take his bed. The bed-chamber was adjoining the dining-room where the wedding feast was being prepared. Then he was seized with an attack of epileptic madness, and while the persons who were with him were hunting for cords to tie him, he precipitated himself naked into the dining-room, with a shovel, of which he had obtained possession, pursued a woman who fled before him, threw her down and inflicted heavy blows on her head. His father-in-law interposed, when he flew at him and drove him from the house. He cast himself on the ground before the door, biting the threshold with his teeth; then he rose with a shoe-knife in his hand, opened the door with force, crying out that he would kill them. The first person he met was his father-in-law, whom he instantly killed. This attack lasted three days. On the 28th instant his reason returned, but he remembered only the event of his marriage, and nothing of that which came after. He supposed that he had slept all that time. He was at once removed to the asylum of Clermont, where he still remains.

Lesegue relates similar instances where the fits were preceded or replaced by the "delirium of impulse." In one remarkable case, that of the assassin Thouviot, light was shed on the extraordinary motiveless murder of a young girl, by the subsequent occurrence, while the homicide was in jail, of two epileptic fits.[1]

The epileptic paroxysm is often preceded by grave intellectual troubles. Bellod relates an observation in which the convulsive crisis was always ushered in by a state of melancholia, and succeeded by a state of mania. A remarkable case is recorded by Ball[2] of an ecclesiastic who had been epileptic for twenty years. Every month occurred a period marked by two or three complete convulsive attacks. Each of these periods was preceded, for eight or ten days, by a melancholic delirium, characterized by ideas of persecution and by hallucinations of hearing, in which he would hear the most shocking blasphemies. After the convulsive paroxysms, and several days of hebetude which followed, he entered on a phase of *bien-être* and satisfaction inexpressible, in which he spoke incessantly of his restoration; his hallucinations of hearing had left him, and he was enabled to devote himself to his usual religious exercises. This period of *bien-être* would last a fortnight, to be succeeded by a state of melancholia and another convulsion.

In the event of a crime being committed by an epileptic, the criminal should always have the benefit of the doubt as to whether he were sane at the time. The deed

[1] Lectures on Epilepsy, by Jackson, in London Lancet, 1879. Maudsley on Responsibility in Mental Diseases, page 41 et seq.;

[1] Maudsley in his works gives many similar instances.

[2] Leçons sur les Maladies Mentales. Article, "Folie Epileptique."

of violence may, as Ball remarks, be but the first symptom of developing lunacy, or the result of that impulsive, brutal, badly equilibrated character which in an epileptic unquestionably diminishes the moral freedom.[1]

It is true that some epileptics have been characterized by extraordinary mental activity and brilliancy of genius, and Mahomet, Swedenborg, Napoleon, have been cited as examples of epileptics, whose malady did not impair, possibly may have increased their intellectual power. It is, moreover, very probable that much which has passed current among mankind as *revelation* and as *divine*, like Mahomet's visions, was the fruit of genius under the direction of the *furor epilepticus*. Maudsley sarcastically intimates that the invention of the modern sensational novel, with its murders, bigamies, and other crimes, was an achievement of the epileptic imagination. If epilepsy be the result of morbid excitation of the supreme cortical cells, it is easy enough to trace a kinship, and often a causal connection, between this disease and any perversion whatever of imagination and genius.

That the general tendency of the epileptic neurosis is toward mental degradation, amnesia, and dementia, is proved by multitudes of facts in the experience of alienists everywhere.

It is an interesting circumstance in connection with this study, that epilepsy in the parent may engender the insane neurosis in the child, and insanity in the parent may be transmitted as epilepsy to the child. The fact that insanity is essentially a disease of the ganglia of the hemispheres, gives great probability to the theory that epilepsy, which bears such an intimate correlation to it, is itself due to abnormal modifications ("discharging lesions") of the supreme cortical cells. Moreover, the epileptic aura is a sensory disturbance, evidently emanating from some perceptive centre in close relation to the motor area of a member, and epileptic vertigo—attacks of which often precede for months the convulsive motor manifestations of the disease—is a phenomenon affecting the domain of consciousness. It is easier to understand these phenomena on the supposition that they are primarily cerebral than that they are primarily spinal.

In conclusion it should be stated that, in not a few instances, autopsies of epileptics have revealed grave, sometimes gross, lesions of the cerebral hemispheres.[2]

THE END OF THE STATE MEDICAL SOCIETIES.

Since February last we have furnished to our readers records of the meetings of twenty-six State Medical Societies, of three national organizations of specialists, and of the American Medical Association. This certainly shows that there is much activity among American physicians. Whether this activity has correspondingly enriched the science of medicine we will not undertake to say. It is to be borne in mind that although each of the States in the Union has its own Medical Society, many of these organizations have hardly more than a nominal existence, so far as real medical work is concerned. We have received several complaints to the effect that the reports of these societies are not interesting nor instructive reading. The charge is in a measure true, yet it will be found that few State Societies meet without doing something worthy of note. We trust that we shall not be accused of sectarian jealousy if we intimate that decidedly the best work has been done in the New England and Middle States.

Having watched for some twenty years the growth of State Societies, we are glad to be able to say that in the last few years they have been steadily improving. The meetings are better attended, more papers are read, and more interest is shown. It must be admitted also that more dinners are eaten and more excursions are made.

State Medical Societies are very useful agents in the promotion of mutual acquaintance and good feeling, as well as in maintaining that *esprit de corps* which is so valuable to the profession. A cordial shake of the hand, a dinner at the same table, will do more than any by-laws to secure the proper relations between physicians. We urge upon physicians, therefore, an increased interest in their State Societies. The majority of them have still their potency for good in a very crude and undeveloped condition.

A HOUSE DIVIDED.

It seems that all the defenders of the American Code of Medical Ethics are not satisfied with the election of Dr. Austin Flint to the Presidency of the American Medical Association. The objection (which is made by a correspondent of the *New York Medical Journal*) is not that Dr. Flint did not deserve it on personal grounds, but that he does not stand by the old Code in its entirety. The writer referred to says:

"It is scarcely more than a month since Dr. Flint, through the columns of your own journal, labored to break down the force of the restrictive clause in the Code, and concluded by saying: It is to be hoped that the American Medical Association will adopt such modifications in the phraseology of this section as will place restrictions in consultation, not on the ground of doctrines or forms of belief, but on separation from and avowed antagonism to the medical profession. Now, when it is remembered that, on the ground of doctrines and forms of belief, we thrust the homœopaths neck and heels out of the profession, and ourselves created the 'separation' and 'antagonism,' I submit that Dr. Flint does not leave us a visible leg to stand upon. Heaven save us from our friends!

"But I am glad to see that Dr. Flint has so far reconsidered his views as to be able to sign the required pledge to sustain the Code as it is. I hope there is in this case none of that mental reservation referred to by Dr. Flint, Jr., at the Academy, and so ably exposed by Dr. Squibb in the article to which I called attention last week, and that we shall not be mortified next year by any movement toward a change. I am the more solicitous about this as I am informed that a great many joined the movement for re-enacting the old Code in this State in the belief that our leaders would initiate some action in the association this year looking to revision."

There exists much confusion in the minds of many as to the real significance of the "restrictive clause" in the old Code. Some think that it is right as it is, others,

[1] "It were as unreasonable to hang a man for not stopping by an act of will a convulsion of which he was conscious."—Maudsley: Body and Mind, p. 66.

[2] Vide recent papers by Seguin and Jackson.

like Dr. Flint, think that it ought to be changed; and still others think that as it stands, the clause does not really forbid consultations with educated and liberal homœopaths. There has been a great deal of mutual congratulation over the fact that no discussion or dissension regarding the Code took place at Cleveland. But after all would it not have been better and manlier to have faced the matter courageously, and shown some consideration toward the strong feeling, shared, if not initiated by Dr. Flint, that some change is needed.

So far as the position of the profession before the world is concerned, we can only repeat that every week brings new expressions of condemnation and contempt for the unwise and timorous policy of the Association.

LOCATING YOUNG PHYSICIANS.

THE General Association of French Physicians, which met in Paris not long ago, has undertaken a project which is certainly unique and which promises to be very useful. It proposes to organize a bureau for the purpose of securing information regarding the most desirable places in which recently graduated physicians may locate. At present, we are told, many young men leave college with no definite idea as to where they had best go. In consequence they often choose a location without fully understanding what the prospects will be for them, and have to wait a long time before a respectable practice is secured, or perhaps have to abandon the field finally and go elsewhere.

It is proposed to obtain, by correspondence and otherwise, a kind of topographical chart showing where physicians are most needed and where the best prospects for new comers are to be found. The association will also act as agents for those physicians who wish to retire or sell out, or leave their practice for a time.

The plan is highly commended by the French medical journals, and we presume that it can be made to work successfully in France. In this country the difficulty would be in finding any place where a new doctor is wanted. With the young American graduate the question generally is, not where is there an opening, but where is the field least occupied. The advice very frequently given, therefore, is to go to the place which one likes best, and there stick till practice comes. Old Dr. Crosby, of Hanover, used to say for the comfort of his young pupils: "Whereas once I was young, and now I am old; yet have I never seen the intelligent physician forsaken or his seed begging bread."

THE APPEARANCE OF ASIATIC CHOLERA.

Two months ago some cases of Asiatic cholera appeared in Bombay. But little attention was paid to them, and the English Government, whose general policy is not unfavorable to quarantine, is charged with neglecting to take proper precautions against the disease which thus developed. About a fortnight ago a few cases appeared in Damietta, a town of about thirty thousand inhabitants, lying on the east branch of the Nile, between Port Said and Alexandria. In a few days the disease had spread with an appalling rapidity, and in the seven days ending July 4th, over seven hundred deaths were reported. Cases have also appeared in Port Said, at Rosetta, and as we write, a telegram reports a first case at Alexandria.

This rapid development of cholera in a very malignant form, has materially excited some alarm. The disease having developed on the direct route of Indo-European travel, the likelihood of its transportation is, of course, considerable. At the same time, there is less to fear than was the case seventeen years ago, when cholera last invaded European and American ports. Since that time sanitary organization has become perfected, and the profession has learnt that by quarantine, isolation, disinfection, and cleanliness, the disease can be either kept away or greatly limited in its activity.

News of the Week.

THE RHODE ISLAND MEDICAL SOCIETY held its seventy-second annual meeting at Providence, on June 21, 1883. Dr. Job Kenyon, President, in the Chair. About one hundred members were present. The Trustees of the Fisk Fund stated that no prize had been awarded for 1883. Essays were invited on the following subjects for the year 1884: 1. "The Origin and Progress of the Malarial Fever now prevalent in New England." 2. "Original Investigations in Household Hygiene." For the best dissertation on either of these subjects worthy of a premium, they offer a prize of $300 on the usual conditions. The Library Committee reported that four hundred and nine volumes had been added during the past year. The following officers were elected for the ensuing year: *President*—Dr. Job Kenyon; *Vice-Presidents*—Drs. O. C. Wiggin and H. G. Miller; *Secretary*—Dr. Geo. D. Hersey; *Treasurer*—Dr. Chas. H. Leonard. A Board of Censors was also elected, and a Publishing Committee. The president presented a communication from the Newport Medical Society, accompanied by the draft of a law pertaining to the abolition of the coroner system in this State, and the substitution therefor of a system of medical examiners, similar to the system which has worked so well during the past six or seven years in Massachusetts. This draft of an act was presented to the General Assembly at the May Session, referred to the Judiciary Committee, and lies over until the next meeting of the Legislature. The profession in Newport, who initiated the movement, ask the State Society to co-operate in securing the enactment of this much-needed law. The Society adjourned to meet in three months at Newport.

THE NEW YORK POLYCLINIC has organized a medical society of its own, composed of members of the faculty and graduates of the institution.

THE PRICE OF HIS BLOOD.—Edward Banks, a colored man, has begun suit in the Sixth District Court, before Justice Kelly, against Dr. Henry J. Garrigues and Charles J. V. Okerberg, for $250, as the value of eight ounces of blood taken from Banks and injected into the veins of Mr. Okerberg. It appears that on February 7th last this gentleman went to bed in a small, close room, blowing out the gas. In the morning he was found insensible. Dr. Garrigues and Dr. Frederick E. Valentine treated him, and at the suggestion of the former the operation

of transfusion was performed. The patient recovered, and now Banks, who furnished the material for the operation, claims what he considers a fair compensation.

MEDICAL DEPARTMENT OF YALE COLLEGE.—At the meeting of the President and Fellows of Yale College, held June 27th, Dr. Thomas H. Russell, of New Haven, was appointed a professor in the Medical Department of Yale College. He will occupy, by vote of his colleagues, the chair of Materia Medica and Therapeutics, which is made vacant by the transfer of Professor C. A. Lindsley to the Chair of Theory and Practice. The latter chair was made vacant by the death of Professor Wilcox.

BUST OF DR. BIGELOW.—The sculptor, Launt Thompson, is at work upon a bust of Dr. Bigelow, which is to be placed in the new building of the Harvard Medical School.

PANIC IN THE AIR.—We recently suggested that there was just now an "epidemic constitution," favorable to the development of panics. This was illustrated last week by a panic which occurred upon a Fulton Ferry boat, and which was caused simply by a sudden shower of rain. Fortunately no harm was done.

CONTAGIOUS PLEURO-PNEUMONIA ON STATEN ISLAND.—The ravages of pleuro-pneumonia among the cattle on Staten Island have been increasing, and the Boards of Health in Middletown, Westfield, Castleton, Smithfield, and Northfield, are busy with the subject. In two cases the carcases of the diseased animals, which had been hastily sold to the butcher by the owners as soon as the sickness was noticed, without inquiring into the cause, were found in the meat markets about to be offered for sale. Upward of forty head have died already in one town. Stringent efforts will be made to quarantine the animals.

HATS AND SUNSTROKE.—Scientific hatters, says a contemporary, are beginning to discover that the liability to sunstroke when the head is covered with a low-crowned straw hat is as 100 to 1 compared with a high-top beaver. The true summer hat has not yet been invented. When it does appear it will be a cone-shaped affair, light, and lined with sponge, and surrounded by a broad brim.

We very much doubt the important relation above described, between hats and sunstroke. High temperature, exposure, over-exertion, indiscretions in food and drink, bring on sunstroke without much reference to high or low crowns, or the popular cabbage-leaf.

SMALL-POX AMONG THE INDIANS.—A despatch from Dr. Warren Day, of the Mohave Indian Agency, Arizona, states that there is a general outbreak of small-pox among the Arizona Indians. Supplies of fresh vaccine virus are urgently requested.

THE FIRST VESSELS OF THE SEASON WITH YELLOW FEVER on board arrived at Ship Island June 28th and 29th. They were at once quarantined and disinfected.

THE STATE BOARD OF HEALTH held a special meeting at the Capitol on June 29th. The sanitary committee submitted detailed statements of its work under the laws to prevent the adulteration of food and drugs and to prevent the sale and use of dangerous illuminating fluids, especial reference being made to an injunction placed upon the sale of what is called "lie tea."

Mr. Erastus Brooks presented the subject of the alarming increase of pleuro-pneumonia in milch cows on Staten Island, and asked what aid the Board could give in helping to suppress the plague and to punish those responsible for it. The Board passed a resolution calling the attention of the National Commission on Cattle Plagues to the cases. The Board will meet at Ogdensburg on August 9th.

RESTRAINED FROM ISSUING DIPLOMAS.—The College of Physicians and Surgeons, of Buffalo, known also as the Mohawk College and the College of Rational Medicine, which tried to get a charter from the Legislature last winter and failed, its true character being shown up, has recently become involved in a legal complication. It has prepared about twenty young men for graduation, but at last an injunction was secured from Judge Haight forbidding the college to issue certificates or diplomas as a legally incorporated college of medicine and surgery. The college claims legal incorporation under the laws of 1882, and the question whether this claim is well-founded will be argued in court, probably in September. Until that time no further action will be taken.

It will be remembered that this college stands on about the same footing as the U. S. Medical College of this city.

UNFORTUNATE COUNTER-PRESCRIBING.—A Second Avenue druggist in this city who attempted counter-prescribing has, along with his patient, come to grief. It appears that he advised a woman who inquired of him for a physician to take his own counsel for her sick husband, and prescribed for the patient, whom he had not seen, a medicine which the patient took and shortly after died, in spite of the efforts of some physicians, who declared that he died of poisoning by opium. Everybody will wish, if this story turns out to be true, that Leman may receive the extreme penalty of the law for his quackery.

THE TAX UPON PATENT MEDICINE ceased on July 1st. Most of what did go into the hands of the Government, will now enrich the owners of patent cure-alls. We trust that they will be able to pay their religious weekly supporters with increased liberality.

THE NUMBER OF PHYSICIANS IN NEW YORK CITY.—Some special inquiries having been made of us regarding this, we would say that the total number of physicians and surgeons in New York State in 1880, according to the United States Census, was 9,272. This number has now undoubtedly swollen to 10,000.

In what, for distinction's sake, may be called the Physician's Medical Register for 1883–84, a list of only 2,684 names is given, which number represents the regularly educated physicians in affiliation with regular medical societies. The remainder are composed of homœopaths, of whom there are probably 500 or 600 in the State, eclectics, and nondescripts.

SYPHILIS IN THE NINTH CENTURY.—The Chinese are first in everything; the Japanese press them hard, and in the matter of syphilis, seem to have precedence. Between the years A.D. 806 and 810, says the *British*

Medical Journal, an emperor of Japan commanded his court physicians, Abemanas and Idzumo Kirosada, to collect in one volume all extant records of native medicine and surgery. A manuscript copy of this work, for centuries forgotten, although the facts of its origin were recorded in Japanese history, was found in 1827 by a priest, in a provincial Buddhist temple. Dr. Scheube, of Leipzig, has recently examined this work, and, in an article published in a recent number of *Virchow's Archiv*, has shown its undoubted authenticity and its high value from a purely scientific point of view. It was written long before Chinese ideas had penetrated into Japan and influenced native practitioners. The most interesting passages are descriptions of local and general affections, which clearly prove that syphilis, and several allied disorders, were well known to the ancient Japanese. Chancroid and phagedenic chancre are clearly described, as well as a "swelling on the penis, of the size of a millet-seed," followed by eruptions, feverishness, pains in the bones and head, blindness, swelling of the testicles, and other very familiar symptoms. These were observed to continue for many years. The passages of this work, called the "Daidorui Thiu-ho," which relate to the treatment of these symptoms, have not yet been translated into English. Herbs alone appear to have been used, and without much success; mercurial treatment was introduced at a comparatively recent date, from Europe. The ancient Japanese surgeons do not appear to have recognized the venereal origin of the disease which they describe, although the "Daidorui" distinctly traces all the secondary symptoms to "the poison from the affected organ."

Damages for the Destruction of Examination Papers.—A recent decision in a Cincinnati Justice Court will perhaps alarm some of our medical teachers who think too lightly of the intellectual efforts of medical students. A young lady medical student, the plaintiff, was a graduate of Pulte Medical College for the year 1883. The examinations at the close of the term were conducted in writing, and under test conditions. Dr. Hartshorn, the Professor of Surgery, conducted the examination on that subject by writing a list of twenty-three questions on the black-board, and requiring the students, in his presence, to write the answers. The plaintiff wrote about seventeen pages of manuscript in answering the questions, and handed the same to her Professor. Afterward, having determined to have the several results of her examinations published in pamphlet form, as an aid to her in starting in her profession, she called upon the members of the College Faculty and requested a return of the papers, or copies thereof. All of the professors so requested returned the papers, except Dr. Hartshorn, who, instead of giving her the papers, or a copy, threw them in the fire and burnt them up. The strange conduct of the Professor could not be explained satisfactorily, and upon the facts and testimony relative to the value of the papers, the court assessed the damages for the destruction of the same at $300.

A Rare Case Indeed.—The *Australasian Medical Gazette* publishes the following account taken from a New Zealand paper of February 23d: "A most extraordinary and painful phenomenon has lately occurred in Warsaw. A lady died under somewhat peculiar circumstances, which gave rise to a report that her death had been caused by her husband's ill-treatment. Hence, several weeks after the interment, her body was exhumed for post-mortem examination, when it was found that in the grave a perfectly healthy child had been born. This gives a startling new meaning to the word 'posthumous.'"

Upon the above the editor of the *Gazette* comments as follows: "This case, though extraordinary, is possibly true, two similar cases being recorded, one in the *Medical Gazette*, vol. xlvi., p. 713, the other in *Casper's Vierteljahrsschrift*, 1861, p. 186. It is more probable, however, that the woman was buried in a state of suspended animation, and that the birth took place during her life. If it took place after life had departed, it is certain it occurred almost immediately after death, and before the muscular contractility of the uterus had ceased, the body having been coffined very quickly, and the child remaining unnoticed prior to burial."

Lister on Listerism.—Professor Lister has written the following letter to Mr. Henry Gray Croly, in response to an inquiry whether he had given up the spray in operations:

Dear Mr. Croly: I have not given up the use of the spray, although I certainly regard it as the least important part of our antiseptic arrangements. Whatever other good it may do, it is a very mild form of antiseptic irrigation, and tends to keep the *entourage* of the wound, including the surgeon's hands and instruments, pure. But if I had not a spray-producer at hand, I should not on that account omit other elements of antiseptic treatment. I still use the spray in changing dressings, so long as the wound is not merely superficial. But far more important than using the spray is it to make a point of covering the wound with some pure antiseptic material before beginning to wash the parts which were covered with the edge of the dressing only, and were therefore impure. In other words, I believe one of the commonest causes of failure is dabbing alternately the impure surrounding parts and the pure wound with the same piece of rag, which, though moistened with carbolic lotion, cannot work miracles.

Believe me, yours very truly,

Joseph Lister.

Obituary.

BEVERLY LIVINGSTON, M.D.,

NEW YORK.

It is most sad to have to record the death of one who, after years of hard work and careful preparation, had just begun to enter a brilliant professional career. Dr. Beverly Livingston, who died most suddenly and unexpectedly of diphtheria, on June 30th, was born in 1852. He graduated at the Sheffield Scientific School, at Yale, and took his medical degree at the College of Physicians and Surgeons of this city in 1877. He entered Bellevue Hospital as an *interne*, and was there for two years. He then went to Europe, and studied several years in Paris and in Germany. Returning to this city, he began his practice here under the most promising circumstances. He was attending physician to the Nursery and Child's Hospital, member of the Academy of Medicine and of the Pathological Society. He had already shown unusual attainments as a pathologist, as well as practical skill as a physician. Personally Dr. Livingston was a general favorite, and few young men had a wider circle of friends. In his death the profession has sustained a loss which all who knew him will keenly appreciate. For ourselves with our sorrow we can but feel a bitterness at the fate which so ruthlessly cut down in an hour the labor and promise of years.

Reports of Societies.

MAINE MEDICAL ASSOCIATION.

Thirty-first Annual Meeting, held in Portland, Me., June 12, 13, and 14, 1883.

GEORGE E. BRICKETT, M.D., OF AUGUSTA, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

FIRST DAY—JUNE 12TH.

A BIOGRAPHICAL sketch of Dr. Alexander Ramsay—who was a very prominent medical teacher in this State seventy years ago—written by Dr. Geo. P. Bradley, U. S. N., was presented, and referred to the Publication Committee.

DR. S. P. WARREN, of Portland, reported a case of absence of uterus in a married woman, and a case of cyst in the vesico-vaginal wall.

A committee was appointed to consider the question of providing a banquet, and, on its recommendation, a committee, with Dr. J. M. Bates, of Yarmouth, as chairman, was chosen to report on the subject next year.

THE PRESIDENT, in his inaugural address, paid a fitting tribute to his predecessors, sixteen of whom are still alive. He recommended efforts to secure

THE ESTABLISHMENT OF A STATE BOARD OF HEALTH, AND A BOARD OF REGISTRATION.

Stress was laid upon the value of investigations into the properties of new remedies. The medical schools at Portland and Brunswick, and the Maine General Hospital were commended, and loyalty to the Code of Ethics of the American Association enjoined.

Certain proposed amendments to the constitution, introduced by Dr. E. F. Sanger, of Bangor, were acted upon. Those relating to discipline, and which, if adopted, would bring into the meetings differences between members which are now disposed of by the censors, were rejected by a unanimous vote; and a similar fate attended those which related to officers and membership. As their author was not present, there was no voice to support them.

DR. O. ST. C. O'BRIEN, of Bristol, visitor to the Portland School for Medical Instruction, reported that the institution was in excellent condition, and that it presented unusual facilities for obtaining an education.

DR. J. G. PIERCE, of Freeport, read a paper on

SYNOVITIS,

emphasizing the advantages of treatment with the aspirator and elastic bandages.

DR. A. K. P. MESERVE, of Portland, presented an essay

ON ACUTE INFLAMMATION OF THE MIDDLE EAR.

A very large proportion of these cases comes to the general practitioner for treatment, and it is, therefore, important that the profession generally should be familiar with their management. The paper was eminently practical.

DR. H. N. SMALL, of Portland, read an elaborate paper on

EXTRA-UTERINE FŒTATION,

illustrating the subject by a description of a fatal case in his practice. In the discussion which followed, a number of members reported cases which they had seen. One was mentioned in which the fœtus became calcified, and remained in the abdomen many years—the woman, meantime, bearing a number of children.

DR. S. H. WEEKS, of Portland, made some extended remarks on fractures of the elbow-joint. An animated discussion ensued, some members advocating the rectangular position of the joint in the treatment of most cases, while others favored the straight position, in accordance with the theory of Dr. Allis. A marked difference of opinion obtained also with reference to the time of beginning passive motion.

SECOND DAY—JUNE 13TH.

DR. O. A. HORR, of Lewiston, visitor to the Medical School of Maine, reported that the institution maintains its high standard in all respects. The examinations are strict and searching, and a diploma is granted to no one who does not reach seven on a scale of ten. The new anatomy law has operated to the advantage of the school.

DR. E. E. HOLT, of Portland, read a paper on diseases of the mastoid.

The Committee on Revision of the By-Laws, appointed last year, was discharged from further service, and its work was assigned to the Publication Committee.

DR. A. H. BURBANK, of Yarmouth, read a paper on

THE INDUCTION OF PREMATURE LABOR,

in cases where contraction of the pelvis forbids the birth of a living child at term. He believed this procedure should be instituted much more frequently than it is, and recommended gradual dilatation of the os with the digit.

DR. J. T. DANA, of Portland, introduced

THE SUBJECT OF BRIGHT'S DISEASE,

detailing the symptoms of various forms, and illustrating his points with accounts of several typical cases. We are justified in a more hopeful prognosis in many cases than formerly, when the pathology of the disease was less perfectly understood.

DR. J. A. SPALDING, of Portland, read a paper giving an account of the testimony in a trial for alleged malpractice, where he was called as an expert.

The necessity of the early removal of an eye which is the subject of traumatic inflammation was carefully discussed and illustrated.

The officers for the ensuing year were then elected.

The annual oration was pronounced by DR. M. C. WEDGWOOD, of Lewiston, whose subject was

RATIONAL MEDICINE AND QUACKERY.

He spoke of various forms of charlatanry which have adopted particular names, but dwelt particularly upon quackery as it is often met with in the regular profession, displayed by men who prate about their allegiance to codes, and yet undermine and traduce their fellows. Rational medicine will achieve its greatest triumphs only when education of mind and heart and hand are insisted upon in all its disciples. All exclusive dogmas—allopathy as well as homœopathy—are based upon error, while rational medicine embraces every truth from whatever source.

DR. B. F. STURGIS, of Auburn, reported a case of chronic abscess of the tibia.

DR. S. C. GORDON, of Portland, the Committee on Necrology, presented biographical sketches of the following deceased members: A. Crosby, Waterville; W. H. Brown, Bangor; R. Curtis, Richmond; J. P. Grant, Saco; W. W. Greene, Portland; W. Sweat, Hollis; R. E. Paine, Camden; D. M. Tolford, Portland; and D. F. Ellis, Brunswick.

DR. F. H. GERRISH, of Portland, reported

A CASE IN WHICH THE BLADDER WAS DIVIDED BY A SEPTUM,

so that a lithotrite could not be so introduced as to reach a free calculus, which was easily touched with a catheter. Lateral lithotomy was performed, and the patient, though seventy-five years old, did not have an unfavorable symptom afterward.

DR. GORDON read a paper on the treatment of some accidents occurring during parturition, devoting especial attention to lacerations of the cervix, ruptures of the perineum, and cystocele. The essay displayed great familiarity with the subject, and abounded in illustrations drawn from practice.

THIRD DAY—JUNE 14TH.

The Board of Censors made their report in substance as follows:

It was recommended that the next annual meeting be held in Portland, on the second Tuesday in June, 1884.

Orator—Dr. A. L. Hersey, Oxford. *Delegates to other medical societies:* New Hampshire—Drs. T. A. Foster, Portland, and D. L. Lamson, Fryeburg; Vermont—Drs. W. C. Mason, and R. K. Jones, Bangor; Massachusetts—E. H. Hill, Lewiston, and A. M. Peables, Auburn; Rhode Island—C. T. Moulton, Cumberland, and J. L. Horr, Cumberland Mills; Connecticut—O. St. C. O'Brien, Bristol, and A. J. Billings, Freedom.

Visitors to Portland School for Medical Instruction—C. A. Packard, Bath, and J. A. Richards, Farmington. *Visitor to Medical School of Maine*—S. Laughton, Bangor.

It was recommended that Dr. W. H. Simmons' request, to be allowed to withdraw from the Association, be granted. It was reported that Dr. C. Seavey, of Bangor, had been tried on charges preferred by Drs. Sanger and Mayo, and that the charges were not proven.

A large number of applicants for membership were recommended, and were at once admitted by vote of the Association.

DR. WEEKS reported a case of immense sarcoma of the head, which illustrated the importance of early removal of morbid growths. He mentioned some of the principal features of a case of oöphorectomy which he had recently treated, and promised a full report of results at the next meeting.

The following committees to secure legislation were appointed in accordance with the recommendations of the President in his address: On State Board of Health—Drs. Dana of Portland; Bates, of Yarmouth, and Weeks, of Portland. On registration of practitioners—Drs. O. A. Horr, of Lewistown; Webster, of Augusta; O'Brien, of Bristol; Walker, of Thomastown, and Smith of Whitefield.

The customary votes of thanks were passed to the city for the use of the rooms, and to various officers; and the Association adjourned at noon on Thursday, after a very pleasant, harmonious, and profitable meeting.

NEW HAMPSHIRE MEDICAL SOCIETY.

Ninety-third Annual Meeting, held in Concord, June 19 and 20, 1883.

(Special Report to THE MEDICAL RECORD.)

THE Society was called to order at 11 o'clock A.M. The President, DR. A. H. CROSBY, of Concord, in the Chair.

Prayer was offered by the REV. F. D. AYER, and the usual committees were appointed for the session by the Chair.

Delegates being present from Vermont, Rhode Island, and Massachusetts, they were introduced to the Society and made welcome guests of the association.

After some routine business had been transacted the proceedings of the Council were read by the Secretary, from which it appeared they had recommended twenty-five physicians for new members; that only four deaths had occurred during the past year; one new district society had been chartered; matters of ethics had been duly disposed of, and all matters of new business had been attended to with due regard to the interests of the Society.

It appeared that they had taken into consideration the condition of the collections in the Surgeon-General's office at Washington, D. C., and offered pertinent resolutions looking toward the perpetuation of these valuable collections, in urging upon their Congressmen the necessity of the Government making an appropriation sufficient to construct a suitable building, with all the appointments necessary to preserve and protect these contributions to medical science from a hard-worked and self-sacrificing profession.

The proceedings of the Council were duly accepted.

At twelve o'clock THE PRESIDENT read his annual address, taking for a subject

THE COUNTRY DOCTOR.

He alluded to the toil and hardships to which their professional life led in fitting terms, and comparing their resources in medicine and surgery with those of their more favored brethren, who, living near or in the great centres of population, where every known drug or surgical appliance could be found, and professional assistance could be had at a moment's notice, he said that their judicious selection of a few standard drugs, and the mechanical ingenuity they displayed in improvising surgical appliances to meet the wants of an individual case was a surprise to many a city surgeon, while the results obtained would fairly rival that attained in the large hospitals.

His address was listened to with attention, and was referred to a committee for publication.

Orations by Dr. G. C. Blaisdell, of Contoocook, and Dr. George W. Hatch, of Wilton, treated upon professional labor in general terms, while

AN ESSAY ON COLDS,

by DR. W. T. SMITH, of Hanover, was an interesting paper upon a familiar subject, but entitled to consideration, as being one to which our attention is so often called.

The speaker gave a *résumé* of the effects of cold upon the surface of the body, the shock to the system, and how its injurious influence was transmitted to the nerve-centres, and reacted upon organs and tissues at a distance from the part exposed.

He alluded to the epidemics of influenza that have passed into history, and while freely admitting that the unsanitary surroundings of the people must have had its influence in preparing the system for the easy introduction of disease, yet the atmospheric influence upon the skin and air-passages, must have been the exciting cause of their development.

DR. PRAY, of Dover, presented a long paper upon variola, of which no brief abstract would do justice, and DR. J. A. WATSON, of Concord, gave a paper

ON WATER POLLUTION.

He gave some interesting facts that had been developed in the State by the Board of Health, and the statistics of several wells that had been examined and condemned. He also appealed to all present to investigate into the condition of the water supply in all cases of a doubtful character or what appeared to be of mysterious origin, assuring the members that the Board would be glad to respond to the assistance of any one who had cases of this character to investigate.

Several other papers were read, and discussions followed until late in the evening, the anniversary dinner having been served at 2 P.M., at the Eagle Hotel.

The Society met at 8 A.M. Wednesday morning, and was called to order by the President, when the Secretaries of the District Societies made their annual reports, from which it appeared that they were in a flourishing condition.

The Treasurer made his report, showing the Society to be in sound financial condition, having about sixteen hundred dollars in the bank and current funds.

The election of officers followed, and Dr. John W. Parsons, of Portsmouth, was elected President; Dr. John Wheeler, Pittsfield, Vice-President; Dr. D. S. Adams, Manchester, Treasurer; Dr. G. P. Conn, Concord, Secretary; Dr. A. P. Richardson, Walpole, Anniversary Chairman; Drs. A. H. Crosby, C. R. Walker, Concord, and Dr. G. D. Towne, of Manchester, Executive Committee.

A board of ten Censors and twenty Councillors was elected, and a programme for reports and papers was an-

nounced for the session of 1884. Dr. J. S. Billings, U. S. A., Washington, D. C., and Dr. J. H. Mackie, of New Bedford, Mass., were elected honorary members of the Society.

This was followed with discussions and the report of cases until afternoon, when the Society adjourned to meet again in this city on the third Tuesday of June, 1884.

OREGON STATE MEDICAL SOCIETY.

Tenth Annual Meeting, held at Portland, Oregon, June 13, 14, and 15, 1883.

(Special Report to THE MEDICAL RECORD.)

ADDRESS OF WELCOME—PREVALENCE OF CRIMINAL ABORTION IN OREGON — THE QUESTION OF OPERATION IN MORBUS COXARIUS — OCULAR AFFECTIONS IN CONSTITUTIONAL DISEASES—ELECTION OF OFFICERS—SUBNITRATE OF BISMUTH AS AN ANTISEPTIC—DENTITION AND AFFECTIONS RESULTING THEREFROM—GUNSHOT WOUND OF STOMACH—SPONGE-GRAFTING.

THE Society was called to order at two o'clock, President DR. C. C. STRONG, in the chair.

The REV. DR. F. R. MARVIN being present was invited to the platform and opened the meeting with prayer.

DR. C. H. WHEELER then welcomed the Society to Portland in a very appropriate address.

DR. S. E. JOSEPHI, of the Oregon Hospital for the Insane, extended to the Society a cordial invitation to visit that institution during the session.

The Executive Board having reported favorably, Drs. Jas. F. McCormac, Marshfield; Hannibal Blair, Albina; J. C. Whiteaker, Portland; John S. Stott, Hillsboro; Otto S. Binswanger, Portland; J. A. Fulton, Astoria; Chas. E. Bebee, Goldendale; G. Cooke Lane, Portland; D. Raffety, East Portland; A. G. Avery, Portland, were elected active members of the Society. Rev. F. R. Marvin, M.D., was elected an honorary member.

DR. G. M. WELLS then called the attention of the Society to a case of parametric abscess from which he had taken that morning a large amount of pus. The doctor stated that his principal object in speaking of the case was the fact that it was one of many similar cases which came under his observation as the result of criminal abortion, which was practised in this city to an alarming extent, and hoped the Society might take some steps in the direction of suppressing the practice.

DR. B. A. OWENS then presented a case of hip-joint disease for examination, and asked the Society to recommend a course of treatment. The disease was in the beginning of the second stage, and from the examination of pus aspirated from an accumulation just below the great trochanter, it was evident that the bone was diseased and that the process of exfoliation was established. The question of treatment elicited an interesting discussion, Drs. Wells, Saylor, Blaney, Tyler-Smith, and Owens recommended excision of the bone, while Drs. Givens, McKenzie, Dodson, Lane, McKenzie, and Fraser advised rest with extension and counter-extension of the limb, etc.

Meeting called to order at 10 A.M. June 14th by C. C. STRONG, M.D., in the chair.

DR. F. B. EATON read a paper entitled "Diagnostic Importance of Ocular Affections in Constitutional Diseases." The paper was discussed by Drs. McKenzie, Givens, and Lane.

The time fixed for the election of officers having arrived, the Society took up that order of business, the election resulting as follows: *President*—Dr. W. H. Saylor; *Vice-President*—Dr. J. W. Norris; *Secretary*—F. P. Fraser; *Member of the Executive Board*—Dr. C. M. Wells.

DR. SAYLOR then presented a case showing the favorable result of an operation of excision in hip-joint disease.

DR. HOLT C. WILSON read a paper on "Antiseptic and Aseptic Surgery," in which he called special attention to the use of subnitrate of bismuth as an antiseptic. The paper was discussed by Drs. Watkins, Givens, Eaton, Fulton, and J. R. Smith.

DR. JOSEPHI presented a paper entitled "The Present Condition of Insanity throughout the World," giving very valuable statistics on the subject.

DR. B. A. OWENS read a paper entitled "Dentition and Affections Resulting therefrom."

The Society then selected the following subjects for special consideration at its next annual meeting: Diseases of Joints; Headaches; Tuberculosis; Pathology of Pregnancy; Uses of Bismuth; Typho-Malarial Fever.

Meeting called to order at 10 A.M. June 15th, President C. C. STRONG, M.D., in the chair.

A paper was then read to the Society by DR. J. F. MCCORMAC, describing a case of "Gun-shot Wound of the Stomach with Recovery."

DR. SAYLOR then read the report of some cases of sponge-grafting in chronic ulcers with marked success.

DR. C. C. STRONG, President, then read his address on retiring from the chair.

DR. W. H. SAYLOR, President-elect, was conducted to the chair and read a short inaugural address.

On motion, a committee was appointed to draft resolutions in regard to deceased members.

Portland was selected as the place of the next annual meeting.

There being no further business the Society adjourned *sine die*.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE NEW OUT-PATIENT DEPARTMENT AT ST. MARY'S HOSPITAL — THE NEW LAW COURTS — DR. OLIVER'S TEST-PAPERS AT THE CLINICAL SOCIETY—THE ARMY MEDICAL INQUIRY.

LONDON, June 13, 1883.

THE new out-patient department of St. Mary's Hospital has been opened. It is a decided improvement on the old rooms, which occupied the basement and were mainly lighted by skylights. The new rooms are lofty, well lighted, and fairly well ventilated. For the latter purpose Tobin's tubes are placed in every room, and a large extraction shaft surmounts the central hall. The outer walls have, here and there, bricks perforated with conical holes—the large end innermost—the object being to bring air in without draft. All the passages have their walls covered with glazed bricks, which will conduce greatly to cleanliness. Close stoves are at present employed for warming the rooms. It seems a pity hot water or warm air was not employed. Greater uniformity in the temperature would have been thereby attained. The department is connected with the main building by a short flight of steps, which is roofed in, but not closed in at the sides. This seems a pity, and cannot but prove unpleasant in winter. It is also a pity that the new building has not been so arranged as to enter on the level from the main corridor of the hospital. As it is, on entering the hospital you *ascend* a short flight of steps to the main corridor, pass along it, then *descend* half-a-dozen steps to the new out-patient department, and then *ascend* a flight of steps to the consulting-rooms. The patients go *down* steps from the street, then *up* a flight to see the doctors, then *down* again to the dispensary, and finally *up* a few steps into the street.

Architects never seem to consider stairs a disadvantage. At the new Law Courts, the judges—most of whom are old men—have to ascend about forty steps to their rooms. No lifts have been provided. The Courts are also said to be damp, and cases of illness are stated to have occurred among the officials.

At the last meeting of the Clinical Society Dr. George Oliver, of Harrogate, demonstrated his method of detecting sugar in the urine by means of test-papers charged with carmine of indigo and carbonate of soda. One of these papers placed in a test tube with a little water and heated gives a blue solution. If a drop of saccharine urine be added first a play of colors ensues on heating—purple, red and straw, successively. On shaking, the colors reappeared in the reverse order. Heating again brought them out again. A confirmatory test was applied by dropping in a paper charged with corrosive sublimate while the indigo solution was still hot, which immediately gave rise to a blackish green precipitate. Non-saccharine urine merely gave a transparent green solution with the mercuric paper. Dr. Oliver claims that his method will detect sugar in any proportion in the presence of albumen, peptone, pus, blood or bile; that it gives no play of colors with uric acid; and that it is cleanly and portable. Dr. Oliver has not obtained the characteristic play of colors with the indigo test-paper with any other substance but glucose.

The army medical inquiry has excited considerable interest. The report is not yet published, but proof-sheets have been communicated to *The Times* and an article on the subject has already appeared in that paper. A memorandum on the subject by Sir W. MacCormac, which is to be published as an appendix to the report, also appears in the current number of the *British Medical Journal*. Some of the charges against the medical department will probably fail to be sustained, whilst others refer more properly to the commissariat and military departments. The medical department will, though, doubtless be made the scape-goat.

As an illustration of the repute in which the profession is held by the Government, it may be remembered that, when votes of thanks were passed by both Houses of Parliament to the officers engaged in the Egyptian campaign, the name of the chief medical officer was not included. The medical profession has always been treated badly in the public services. The army, naval, Indian, and convict medical services have each in turn been the scenes of shabby treatment to medical men, so history is but repeating itself now. Lord Wolseley's evidence seems particularly unsatisfactory and at variance with his statements in public despatches at the time of the alleged shortcomings. Lord Wolseley stated that he actually went into the hospital at Ismailia and grumbled at the medical officer because the patients were not supplied with better bread. This gentleman replied that he had complained to the commissariat, but his lordship seemed to think that it was the duty of the medical officers to go out into the bazars and buy bread themselves.

The Parkes Museum of Hygiene was reopened on Saturday morning, May 26th, at its new premises in Margaret Street. Speeches were delivered by Sir Charles Dilke, the Duke of Albany, and others. In the new museum many of the exhibits have the great advantage of being shown in action; for instance, the different varieties of water-closets have had a water supply laid on, and have been connected with the drains, so the way in which the flushing action takes place can be observed.

THE LILY OF THE VALLEY IN HOMŒOPATHY.—Some Western homœopaths have got hold of convallaria, and having read all that scientific medicine has to say about it, are quietly appropriating the drug themselves. Dr. Hall recently read a paper on the subject before the Western Academy of Homœopathy (the feebler the association the more high-sounding the name), at Madison, Wis. Without giving credit to any one but Dr. d'Ary, he tells all about the drug, recommending it in small and large doses. In palpitations and irritable heart he gives one-thousandth to one-tenth of a drop with great success.

OUR PARIS LETTER.

THE ALLEGED WONDERFUL PROPERTIES OF COPPER.—SO-CALLED SYPHILITIC TEETH NOT PECULIAR TO SYPHILIS.

PARIS, June 12, 1883.

THERE are two men in Paris who have the same hobby, though they do not ride it in the same direction. That hobby is copper, and they are both known to your readers. Dr. Burq has for many years maintained that copper was a specific for cholera, for which it should be prescribed, not only for the cure of the affection, but it should be used continually as a prophylactic. Dr. Burq founded his theory on the fact that those employed in the manufacture of copper articles enjoyed a remarkable immunity from the disease. Arguing from this standpoint, Dr. Burq was inspired with the idea that copper would have a similar beneficial effect on typhoid fever. He made particular inquiries, and ascertained that during the recent epidemic of typhoid fever in Paris there were only two deaths among the manufacturers of copper articles. Moreover, he learned that in a copper manufactory in which there were from three hundred to four hundred workman, only one death occurred during the last sixty years from infectious disease, and *that* death was from small-pox. From this Dr. Burq formulated the following conclusions, which he submitted recently at a meeting of the Biological Society: First, there exists an incompatibility between the salts of copper and the microbes of infectious diseases; second, in anticipation of the preventive inoculations of infectious diseases as proposed by M. Pasteur, one could be protected by the administration of large doses of the salts of copper, the innocuousness of which has been shown by M. M. Ducorz and Galippe. Dr. Galippe, it will be remembered, has for some time endeavored to prove the innocuousness of copper, but people both in and out of the profession are rather sceptical about this, and remain under the old impression that copper is a powerful poison. Dr. Galippe lately submitted a paper at the Academy of Sciences in which he asserted that copper was found in large proportion in the nuts of the cocoa tree, from which chocolate is manufactured. It is therefore erroneous to suppose that the copper found in the latter substance is added to it for fraudulent purposes.

Another hobby is that of Professor Parrot, who sees syphilis everywhere, particularly in children in whom, according to him, rickets is one of the manifestations of hereditary syphilis, and he has even discovered syphilis in prehistoric skulls. Professor Parrot is the great champion of France of Hutchinson's interpretation of the lesions of the teeth, which the latter author described as being characteristic of syphilis, but at a recent meeting of the "Société de Chirurgie," where the subject was fully discussed, Hutchinson's theory about syphilitic teeth and Parrot's notions respecting the relation that exists between syphilis and rickets did not meet with much favor. Dr. Magitot, a well-known dentist, as principal speaker on the occasion, declared that from his experience the lesions known as Hutchinson's were not at all peculiar to syphilis, as they are found in children who are not syphilitic, but who are the subjects of other pathological conditions.

The same lesions may also be seen even in animals. He also referred to several cases in which adults bearing these lesions have contracted syphilis, which would have been impossible if they had been already syphilitic. According to Dr. Magitot the following are the real characters of syphilitic teeth: They are small, deformed, irregular, and slow in making their appearance, but he rather startled his hearers when he declared that the dental lesions known as Hutchinson's were due to infantile convulsions. Among other speakers, all of whom rebutted the idea, Dr. Desprès asserted that he had seen several children bearing the dental lesions referred to, but who have never had neither syphilis nor convulsions. Dr. Desprès added

that he had met with one case in a child, whose mother had just recovered from typhoid fever when she became pregnant, and another who was fed artificially bore these lesions. These two cases would seem to suggest that the malady or state of health of the parents would have a certain influence on the regularity of the evolution of the teeth in their offspring.

"MEDICAL EDUCATION IN CANADA AND CHURCH INFLUENCES".

To the Editor of The Medical Record.

Sir: Having read an editorial, published in your journal of April 28th, on "Medical Education in Canada and Church Influences," permit me to say that the writer is under a complete misconception as to facts. With the sole object of placing you right on the question at issue, I take the liberty of addressing you.

To begin, you say that the number of students attending Laval University, of Quebec, "became fewer and fewer each year." Now, a reference to the annual announcements issued by the University prove the exact opposite; consequently, the reason advanced by you for the establishment of the Laval Branch in Montreal is not the right one.

Laval University was founded in the city of Quebec at the request of all the bishops of this province, and with the understanding that *there should be no other Catholic University established in opposition to her.* Later on Monseigneur Bourget, then Bishop of Montreal, supported by the professors of the Montreal School of Medicine, in affiliation with Victoria University, of Coburg, applied to Rome asking for a Catholic University in Montreal, giving as a reason that the absence of a university forced the school into an affiliation with Victoria, and that this affiliation with a Protestant university was scarcely in accordance with Catholic precedent, and was absolutely dangerous from a Catholic standpoint. Rome having long ago decided that one Catholic university in the Province of Quebec was sufficient, and knowing that Laval had been founded on this understanding, in response to this application of the bishop and professors, issued the now famous decree of February, 1876, and it was in obedience to this decree that the authorities of Laval established their branch in the city of Montreal. In the year following faculties of theology, law, and medicine were formally organized, and all the professors of the School of Medicine, affiliated with Victoria University, received appointments in the new medical faculty of the Montreal Branch of Laval University.

Shortly afterward, owing to a dispute as to details, a majority of these same professors separated from Laval to continue their school of medicine under its old auspices. So much for the origin of Laval University in Quebec and its branch in Montreal.

I now come to your remarks on the legal aspect of the question.

No action was ever taken by the Montreal School of Medicine to the Privy Council in England. An action taken before the Superior Court in Montreal against the University of Laval, some three years ago, may be considered as discontinued, and as a matter of fact was never brought up in open court at all. The School of Medicine did, however, take the legal opinion of Sir Farrar Herschel in London, and that is all.

The University of Laval, on the contrary, in order to set aside all doubts as to the legality of her position in Montreal, appealed to the Parliament, and in spite of every opposition on the part of the School, a bill was passed by the Legislature of the Province of Quebec to set aside all doubts on the subject. This bill received the sanction of the Lieutenant-Governor, and notwithstanding a further factious opposition by the School, the bill was maintained in Ottawa by the Governor-General.

Therefore, the Montreal branch of Laval University is not, as you erroneously infer, an illegal body. On the contrary, its diplomas are strictly legal. The "College of Physicians and Surgeons" of this Province has consequently never had the slightest reason for withholding his license from bearers of the Laval diploma.

Furthermore, Rome, seeing that they who had made representation in the first place that the affiliation with a Protestant university was dangerous to the faith of their Catholic students still continued the said affiliation, and in addition did all in their power to injure the branch of Laval opened in Montreal, issued another decree, that of February, 1883, requiring the immediate and complete fulfilment of the previous decree of 1876, and in addition, ordering that all efforts to injure the University of Laval and its Branch, should forthwith cease, and that all good Catholics should aid in every way possible.

In order to conform to this decree, acknowledged by all Catholics as obligatory, the Bishop of Montreal has issued his mandate to the Sisters of the Hôtel-Dieu, to receive the Laval professors and students into their hospital, in place of those of the School of Medicine in affiliation with Victoria.

The Sisters do not refuse to obey their Bishop, as you assert, on the contrary they have transmitted his order to the professors of the School, declaring at the same time their intention of abiding by his mandate.

The School again in its turn appealed to all the Bishops of the Province in Council assembled. The Archbishop of Quebec, the Bishop of St. Hyacinthe, and the Bishop of Pembroke were charged by the Council with the execution of the Papal decree, and are at the present moment in Montreal, in furtherance of this object.

Hoping you will, by the publication of this letter, correct the many errors into which you have doubtless quite unintentionally fallen, I beg to subscribe myself, Mr. Editor,

Your obedient servant,

E. P. Lachapelle, M.D.,

Secretary Med. Fac. Univ. Laval, Montreal, and Treasurer of Coll. Phys. and Surg., Prov. of Quebec.

Montreal, May 29, 1883.

[We have considered all the points in the above letter of Dr. Lachapelle, and must say that he has not convinced us of any material incorrectness in our editorial of April 28th on the above question. It is useless for Laval to assume any other reason for coming to Montreal than that of extreme poverty in Quebec. It is an accepted truth that for good prospects in teaching facilities we require an increasing commerce and population, which bring with them hospital material and wealth to maintain it; and Quebec, unfortunately, has been losing ground in both of these respects instead of increasing. This is an acknowledged fact throughout the whole province. It is quite true Laval obtained the passage of a bill through the Quebec Legislature to give the established branch of its university in Montreal the semblance of legality, but it must not be forgotten that the local government of Quebec has not the power to set aside the enactments of the imperial government, and upon this point rests the illegality of Laval's position. We also understand that the passage of such a bill in Quebec could not have been a very difficult matter, as the will of the Archbishop of Quebec is law in such matters, and the government is simply his mouthpiece. The acceptance of Laval's degree by the College of Physicians and Surgeons as a legal document may be accounted for by the majority of its members being also under the influence of His Grace.—Ed.]

Sir Henry Thompson on Cigarette Smoking.—In a letter to *The Lancet*, Sir Henry Thompson states that if cigarettes are smoked in a holder with a bit of cotton-wool interposed they are less injurious than cigars or pipes. Smoked in the ordinary way, held between the teeth and smoked nearly to the end, they may be most hurtful.

MIDDLE GROUND ON THE CODE QUESTION.

To the Editor of The Medical Record.

Sir: I think that the following editorial from the *New York Herald* of June 25th, one very similar, which recently appeared in the *New York Times*, and others, which have appeared in various papers of influence in different parts of the country, cannot be seen by too many of those of our profession who are keeping up this, to most people, senseless quarrel about a "code":

"A report comes from a town in Wisconsin that a little girl was thrown from a carriage and had her skull fractured. An allopathic doctor was called in and treated the case until the arrival of the family physician, who was a homœopath. Soon afterward the young patient grew worse and serious symptoms were developed, which required special surgical treatment. As the homœopath made no profession of surgical skill the allopath was recalled; but, on finding the former in attendance, obstinately refused to have anything further to do with the case, on the ground that he could not 'consult with a homœopath.' Notwithstanding the earnest entreaties of the anxious parents and the proffered withdrawal of the family physician, the allopath deliberately abandoned the child in its critical condition and, so far as he was concerned, left it to die. He was 'a regular,' he said, and 'must observe our Code.' Nothing was then left to be done but to telegraph to Chicago for a surgeon, who fortunately arrived in time to save the young life.

"For the sake of common decency it is to be hoped that this barbarous illustration of the operation of 'the Code' is an exceedingly rare one. Yet it is but a logical effect of the practical working of a theory which subordinates the instincts of humanity to inhuman notions of medical ethics, and holds the saving of human life of less consequence than the heartless subserviency to a petty system of professional red tape. If the medical profession itself does not soon reform its ridiculous and unmanly 'Code,' then it may be well to inquire whether the law cannot prescribe a proper penalty for such offenders as the Wisconsin 'regular.' In case of the death of a patient under such circumstances trial of the offending doctor for manslaughter might have a salutary effect."

This discussion is rapidly losing us the respect and friendship of the press and of thinking people outside the profession, and transferring it, to a certain extent, to the homœopaths, who have not rendered themselves liable to the same obloquy. Our enemies could not have devised anything more injurious than this. It is useless for us to attempt to explain to what will soon, I fear, be considered an outraged public, the *status* of the question from our standpoint. They cannot and will not understand our position or our explanations. There are fools in all professions, and the "Code" is more apt to develop such instances as the above, among *them*, to the damage of the profession, than to prevent harm by its stringent regulations.

The "Code" refers to a good many points, but the discussion, with unanimous consent, seems to have narrowed itself down to one point—consultation with homœopaths. Well, consultation with homœopaths thirty years ago, was an absurdity, and no respectable physician thought of it. But the homœopathy of the present day is quite a different affair, and consultation with a well-educated homœopath may be as pleasant to the physician and as profitable to the patient as with one of the regular school. Dr. Flint, the honored exponent of the old Code, would have us believe that one who consults with a homœopath connives at fraud. He says, in substance, let him drop his special designation and call himself simply physician, and one may consult with him. Well, how many signs do we now see in New York with the designation homœopathic on them? Very few; they are rapidly disappearing. The better class of homœopathic physicians are repudiating the designation, so far as it indicates exclusive belief, in a particular dogma, or reliance on any exclusive system of practice, either *similia similibus curantur*, or the employment of infinitesimal doses. They seem to be ambitious to be called simply physicians, while we, on the other hand, for some time past, at least, have been gradually admitting that the practice of homœopathy is not *all* fraud or humbug; and that in some cases medicines do act on the homœopathic principle, and also that very minute (if not infinitesimal) doses of many of our drugs when thoroughly triturated in the machinery of the homœopathic pharmacists, act in many cases far more pleasantly and satisfactorily than in their crude form. Witness Ringer's works, now so popular, and the frequent articles in our journals on minute doses, from the pens of some of our ablest practitioners. The absurdities, and worse, the falsehoods of many of the earlier homœopaths, claiming impossible successes, so disgusted us that we naturally scouted the whole matter as fraud and trickery, and did not until of late years give, if we have yet given, the system a fair clinical test. Our codes, in all the societies with which I have had any acquaintance, have been a failure. Let us sweep away all codes as the easiest solution of this very serious disagreement in the profession. If a physician should so far forget his self-respect and the dignity of his profession as to consort and consult with irregulars and disreputable individuals, made M.D.s perhaps by the legislature, he would soon find that he had seriously compromised his standing with his colleagues, and could be summoned before the bar of his medical society on the charge of conduct unbecoming a physician and gentleman, and punished just as effectually as if the Code were in existence—indeed, I think more so.

Our younger and rising men, if they would not lose the esteem and confidence of their friends outside of the profession, must stir themselves, and with the aid of their elders who are not too old to learn new things, abolish codes as so much rubbish of a by-gone age. Let the New Code men abandon their position, and the Old Code men theirs, and meet on a common platform on which all gentlemen belonging to the great profession of *medicine*, not homœopathy or allopathy, ought to be able to stand together.

Harmony.

THE NEW YORK POST-GRADUATE SCHOOL AND THE ABUSE OF MEDICAL CHARITY.

To the Editor of The Medical Record.

Sir: In a letter signed "Itis," and published in a recent number of your journal, under the heading "Polyclinics, Post-Graduate Schools, etc., and their Relation to the Medical Profession," the writer descants upon "the perversion of charity and the development of pauperism among patients who are amply able to pay," and protests "against any institutions whereby *his* (our) means of gaining a livelihood are materially and even seriously compromised."

As the well-defined charges and statements of the letter may create some misapprehension in medical circles, it may be proper to state that the New York Post-Graduate Medical School has from the beginning of its career, persistently advocated, and rigidly adhered to a high standard in the dispensation of its charities, to which, doubtless, is largely due the material support it has secured from the physicians of this city and its environs. But the relations of the patients to the school can best be shown by its printed rules, which are to be found on the cover of each prescription-book of the Institution.

Rule No. XI. says: "Any person applying for medical or surgical relief, who, in the opinion of the Secretary, is able to pay a reasonable sum for advice and medicines, shall be so informed, and (unless it be a case of emergency) referred to private sources for them. No person who is able to pay a reasonable amount for both

advice and medicines shall be entitled to the benefits of this institution. The physicians generally shall have power to reject unworthy applicants." Nor is this all. Each patient is expected to pay for such medicine as is ordered by the physician, and the average price that has been paid for each prescription dispensed at the pharmacy of the School (based on the first one thousand prescriptions, and including those dispensed *gratis* to the absolutely impecunious) has been more than sixteen cents, an average price that would prove remunerative to many of our ordinary city druggists.

Individual opinions may differ as to whether the New York Polyclinic or the New York Post-Graduate School are necessary or "unnecessary," but it is a matter of fact, that medical men from far and from near in our country have seen fit to patronize them, and in sufficient numbers to place their finances on a satisfactory basis.

I am, respectfully yours,

THOMAS E. SATTERTHWAITE, M.D.,
Secretary of the Faculty.

213–215 EAST TWENTY-THIRD STREET.

"CHLOROFORM NARCOSIS DURING SLEEP."

THE article with the above title recently contributed to our columns by Dr. J. H. Girdner has called forth considerable comment. As a continuance of a discussion of the subject we group the following communications:

TO THE EDITOR OF THE MEDICAL R CORD.

SIR: Having read with interest the paper by Dr. Girdner on the above subject, I beg leave to take issue with the gentleman, having myself, in a number of instances, produced chloroform narcosis in children, administering the same while they were asleep and making my examination or operating without the child ever having been aware of the handling it had received. In one case I particularly call to mind, a child, six years of age, having hæmaturia in which a polypus was suspected, the child was anæsthetized upon six or seven distinct occasions for examination and operation, and after each sitting was left sound asleep, not knowing what had taken place when she again recovered consciousness. I have also had occasion to employ the anæsthetic during sleep in a number of cases while house-physician in the Mount Sinai Hospital in New York.

I am, yours, etc.,

L. E. BORCHEIM, M.D.

ATLANTA, GA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Before the evidence is all in, and the case submitted to the jury, I would offer the following as a fragment of "evidence" in favor of the possibility of bringing a sleeping person profoundly under the effects of chloroform without his first being aroused to consciousness. In 1856 I was requested by my then partner, Dr. I. S. Dolson, of Bath, N. Y., to see with him a case in which a bright boy, of about four years of age, in his play had fallen and received quite a severe wound of the face. To avoid an unsightly scar it seemed very desirable to carefully stitch the wound. Voluntary submission on the part of the child was found impracticable, and the mother was equally averse to the child's opposition being overcome by force.

At my suggestion it was decided to try the use of chloroform while the child would be asleep, to aid us in our work. Accordingly, late the same evening, we again visited the patient, and found him in the condition desired.

Without delay I stole quietly into his room, the lights being well turned down, and by gradual approaches I brought a napkin saturated with the anæsthetic to the child's face without exciting cough or the contraction of a muscle. In a few moments the patient was fully under its influence, and the little operation satisfactorily performed by Dr. D. The child slept quietly through the night, and wondered the next morning how he came by the big plaster on his face.

This was the first and last attempt of the kind I ever made; and had no other thought than that it would be practicable in all cases, until the late prominent discussion of the subject in THE RECORD. Success in this direction is only attained by the most careful and deliberate manipulation on the part of experienced physicians, and even then it seems that some fail, and I have little confidence in the sensational newspaper reports of burglaries committed after the inmates of dwellings had first been "chloroformed" by the robbers.

Can any one give us a well-authenticated case of this kind?

H. C. MAY, M.D.

CORNING, N. Y.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Observing in your issue of May 26th, Dr. S. Murill's report of a case of "Chloroform Narcosis During Sleep," stimulates me to write of a similar case which occurred in my own practice.

April 30, 1871, I was attending Walter McF——, aged four years, for morbus coxæ. An abscess having formed, and the little fellow having been under treatment for some time, very naturally had become exceedingly sensitive and irritable. In order to open the abscess, I finally concluded to try to transfer him quietly from a natural sleep to a chloroform sleep, and requested the assistance of Dr. M. A. Halsted. We were quite successful in the first attempt, but, another abscess having formed, we were not so successful in a subsequent attempt.

We hear much more about "chloroform narcosis during sleep" through the lay press than we do through the medical journals; but it is evident that Dr. Murill's case and mine, and probably many others not reported, prove that such a thing is not impossible.

W. F. MORGAN, M.D.

LEAVENWORTH, KANSAS.

CONCERNING MEDICAL DEGREES IN GREAT BRITAIN.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: If your London correspondent will refer to *The Lancet*, May 19, 1883, page 870 (and throughout that journal, *passim*), he will see a critique on a translation of a German work on practical anatomy, by Donald Macallister, M.B., who, in this article, is always spoken of as *Mr.* Macallister. What then becomes of his statement that I am incorrect in saying that an M.B. is not *entitled* to be called Doctor? I maintain that he is not. He is sometimes called Doctor in *pure courtesy*, and nothing more, as licentiates of colleges of physicians are likewise.

I do not *at all* forget that the word physician is used in a different sense in England from what it is in America. Your correspondent seems to think that no one is a physician but a consultant. But any one licensed to practise medicine is a physician, according to common sense and the ordinary meaning of the word. He says the possession of L.R.C.P. does not make the holder of it a physician. Then there is no meaning in language. You will see from the following extracts from the register of the King's and Queen's College of Physicians in Ireland how far his remarks apply to the licentiates of that body:

"Every candidate before admission as a licentiate solemnly declares . . . that he will not engage in any trade . . . nor *compound nor dispense medicine for sale.* If he be an apothecary he must, previous to examination, *surrender the apothecary's certificate.* . . By ancient usage in this country, analogous to 'Rev.' in the case of a clergyman and 'Esq.' in the case of a barrister, the title of 'Dr.' has been applied to a *physician* as distinguished from that of 'Mr.' to a surgeon."

In the above extract the term physician is obviously used to denote one who holds the license of the college,

and when he receives it the college causes to be put in the newspapers an advertisement to the effect that ———, having been duly examined, has been admitted a licentiate and received authority to practise as a *physician*.

I did not say that "gentlemen who are only M.B. are addressed as Mr." What I said was "the M.B. *can* only *call himself* Mr."—a very different thing. Your correspondent should quote more carefully. If those M.B.s who, according to him, modestly *assume* the title of doctor continue to do so after the new bill becomes law, they will render themselves liable to a penalty of £20 (*vide Lancet*, May 12, 1883, p. 849).

Apologizing for trespassing so much on your space, especially as the whole subject is *vox et prætera nihil*,

I am, sir, yours faithfully,

N. V. D. PARKS, B.A.Dub., L.K.Q.C.P.I., etc.

ASHTON, R. I.

THE LEGAL STATUS OF THE PROSPECTIVE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: There is a vital point, it seems to me, on which the Board of Trustees of the American Medical Association, to which is entrusted the publication of its journal, failed to give information. If the journal is to assume the place claimed for it, its publication, with all that appertains, involves a very large financial enterprise, such as can only rest securely upon a solid legal basis. So far, if that body is an incorporated one, I have not been able to learn when or where it became such. If it is not, it seems to me the so-called Board of Trustees, consisting of a member from each State, and appointed to start and conduct the journal, has no legal existence whatever; that they utterly lack the power to make the association or its members financially and legally responsible for its acts; and that as such trustees they can neither sue nor be sued.

I write for the purpose of calling attention to this matter, fearing we may get into a muddle. Very likely, before the enterprise is on its feet, it will be found best to have the association incorporated, or to form a joint-stock company, under the statutes of the State in which the business is to be transacted. In such a case it will probably be found that the trustees must live in the county or State where the business is executed, and that a board with a member from each State is not practical. It may be that I am alone as to my ignorance in this matter, but I suspect there are many others who would like information on the subject.

J. W. HAMILTON.

COLUMBUS, O., June 18, 1883.

A PERFECTLY DEVELOPED MALE CHILD WITHOUT A PLACENTA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Thinking that a short history of this case may be of interest to many of your readers, and desiring to learn from them if any similar case has occurred in their practice (having searched the text-books in vain), I take the liberty of requesting space in your valuable journal for its insertion.

November 14, 1882, I was summoned to Mrs. C——, a well-formed and healthy woman, aged thirty-eight, a primipara.

Found the patient suffering from labor pain; pulse, 120; some vomiting; respiration rapid, and considerable œdema of the lower extremities. Vaginal examination revealed slight dilatation of the os, the vertex presenting. A specimen of urine was obtained and examined for albumen with negative results. Previous history of patient very good, having menstruated at the age of fourteen, and continued to do so regularly without pain until fecundation occurred nine months previously.

The pains being unsatisfactory, I left the patient, saying I would return soon. At 11.30 A.M., about one hour after I left the sick-room, I was called in great haste to the patient, messenger saying she had a fit. Arriving at the bed-side found her in a very violent convulsion, which I learned was the second in half an hour.

Inhalations of chloroform were resorted to, which had the effect of modifying the severity of the spasm, for the time at least; full doses of bromide of potassium and chloral were administered, but without effect; the convulsions returning about every twenty minutes. Repeated efforts to dilate the os uteri failed, Barnes' dilators and the douche being frequently applied in vain, the uterus being anteverted, and the os extremely rigid. At 2 P.M. a hypodermic injection of sulphate of morphine combined with atropiæ sulphas was administered, the bowels having been previously moved.

A marked diminution of the spasms immediately followed the injection, the convulsions not returning up to 4 P.M., but the patient remained unconscious from the first convulsion. At 4.30 P.M. had her thirteenth convulsion. Morphia was again administered hypodermically, but as œdema of the lungs set in and the respirations reduced to 14 per minute, the morphia was suspended and the convulsions returned, the patient slowly sinking. At 5 P.M. a consultation was held, when the case was deemed hopeless. All efforts to dilate the os had to be abandoned. Distinct movements of the fœtus being observed up to 5 o'clock P.M., a request was made to remove the child by Cæsarean section, but was refused. At 6.30 P.M., pulse 100 and feeble; respiration, 17; temperature in the axilla, 99⅘°; patient rapidly sinking until 7.15 P.M., when she died after her twenty-second convulsion.

In about one hour after the death of the patient I was requested to take the child from its mother, some scruples on the part of friends demanding the separation of the child before interment. I accordingly commenced the operation by abdominal section. On reaching the uterus careful section of that organ was made, when a fœtus was observed partly immersed in an inky-black liquid. An effort was now made to remove the child, but as something seemed to hold the fœtus firmly, I inserted my hand into the cavity of the uterus, when I found the cord very rigid and unyielding. Having severed this obstacle, a perfectly formed male child, weighing about twelve pounds, was removed. Search was now made for the placenta, but without success. There was *no placenta*. The umbilical cord was found attached to the fundus of the uterus, and the length of the cord did not exceed four inches.

Permission to remove the uterus for examination was refused, and as every movement in connection with the operation was most earnestly and critically watched, I found it impossible to gain possession even of that portion to which the cord was attached. I did succeed, however, in dividing *this* particular part, but failed to observe any marked difference between it and that portion of the organ previously divided.

The amniotic fluid, which was excessive, measuring, I should say, over three pints, was exceedingly black, but in other respects normal.

VALENTINE BROWNE, M.D.

YONKERS, N. Y.

THE WAY OUT OF THE MUDDLE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In THE MEDICAL RECORD of May 19th is one of the most remarkable articles it has ever been my privilege to read, although accustomed to peruse and digest medical literature for more than twenty-five years.

It is head-lined "Inebriety from Obscure Physical Causes," by T. D. Crothers, M.D., Hartford, Conn. He states that he had previously written an article on the same subject. If the doctor had been familiar with drunkenness in its different degrees, and had seen its

every-day manifestations, he certainly would never have given expression to thoughts so widely at variance with the true inwardness of the matter. True, he claims to have discovered something new, if understood aright, and presents an array of cases, without names or places, to be used in an argument which proposes to remove the subject from the low plane of drunkenness, with all its horrible concomitants, to a level much more elevated and respectable, when the inebriate will be no longer known, as heretofore, but transformed, if not into a lovable, at least into a most unfortunate disease-afflicted person. No doubt this phase of inebriety would be quite acceptable to all excessive drinkers, who still have one spark of manhood dwelling in their bosoms.

It is the very thing every one of them would be pleased to have other people believe; and hence, every one, without a solitary exception, perhaps, would give some cause outside of the true one—a love of liquor—to account for their fallen, degraded condition. This is a part of human nature, and with the fallen ones of mankind it seems to be intensified. Who ever heard of an evil-doer, in any of the ways of transgression in this life, that did not have an excuse to offer for his waywardness—somebody or something to blame for the first false step? It has been ever thus since the day when father Adam so far forgot his manhood as to charge the responsibility to his helpless help-mate, and it doubtless will be to the end of time.

Now comes an excuse for the drunkard, more satisfactory to him than imagination could ever have pictured in his wildest flights of fancy.

Judging from the responses reported to have been received from A, B, and C, the doctor's former communication must have been a real godsend, enabling them to happily find their way out of what had heretofore been considered an inexplicable difficulty.

Were these views endorsed by the medical profession, it would give increased charms to the licentious indulgence of strong drink, and would afford all the protection and encouragement that the most ardent toper could desire. If they are unsound and without any foundation in truth, then they cannot be otherwise than detrimental to the best interests of every community, and should not be promulgated broadcast without a challenge from medical men, who view the subject from a standpoint as different as day is from night. Besides, it must be patent to every one that some unscrupulous doctor may take hold of this new discovery and ply it to his own selfish advantage in manufacturing a reputation and coining money, under the pretence of being a step in advance of his medical co-laborers?

Now every medical man is deeply interested in the truthful solution of this question; for, if the views set forth by the doctor are correct, then the profession was never so befogged and benighted on any subject since it had a beginning. This is a progressive age in all departments of learning. And in this race after something better and more perfect, medical science, in the past few years, has far eclipsed all others.

Still it must be admitted that only the threshold of medical research has been attained, and before the *Ultima Thule* of medical knowledge shall have been reached there can be no doubt that many things now held to be settled in accordance with truth will be set aside as unworthy, under a stronger and more searching light. With thoughts altogether impartial every new thing in medicine should have a fair consideration, and be weighed in the balance. Actuated by such motives, the attention of THE RECORD readers is invited to a careful study of the article in question.

Being reared, and having lived all his life in communities where drunkenness was no uncommon thing, the writer has had a most favorable opportunity for studying it under many different circumstances, and in all its phases, not theoretically, but practically and clinically. The caption, and many expressions throughout the doctor's article, to say nothing of the main drift, sound very strangely indeed to one thus educated.

He says, for instance, there were "a number of cases in whom the causes of inebriety were unknown to the attending physician." How strange, when it cannot possibly be assigned to but one cause, the firm hold of the liquor habit. Further, that "the inebriate is not an enemy to society or civilization, but the victim of physical conditions;" "that inebriety is not a vice but a disease to be cured by treatment." Eight reported cases are given in the article published, to prove this proposition, and to place the subject "above the levels of the theories of reformers and clergymen."

With an eye single to the development of truth, and the general welfare of humanity, these cases have been thoroughly studied and analyzed several times, to see if there was really anything whatever in them; and a strict regard for what appears to be right and proper in the matter compels me to declare, unequivocally, that there is no difference between these reported cases and the thousands of others that have come under my own immediate notice, and about which information has been received from other sources. In other words, these cases portray a faithful picture of drunkenness, through all ages, from Noah's fall down to the present. Either all cases of drunkenness come from "obscure physical causes," or else these reported cases, like all the rest, must be attributed to the true cause, liquor, at first taken for its pleasurable effects, growing into a confirmed habit by repetition, and finally, getting away with them morally, mentally, physically, financially, and in every other way of which it is possible to conceive. No wonder the doctor's cases were changed from good, intelligent, moral, trusty persons, to characters directly the opposite. Such has been the history of intoxicants, where they have held sway, in all bygone time. When a person loses self-control, and gives way to strong drink, his character undergoes a complete change; and he is left an absolute wreck of former manhood, as every one must know who has much contact with drunkenness.

It was intended in the begining to give an analysis of these reported cases, but time and space forbid. Neither is it necessary, since those who may see fit to read this article can refer to the number of THE RECORD indicated and judge for themselves. If they shall do so, the object of this article will have been accomplished.

It is said, "a whole volume could be filled with such cases," and this is not doubted in the least; for sixty thousand drunkards, including laborers, farmers, mechanics, merchants, lawyers, doctors, preachers, take their exit to the unseen world every year. And the question is asked: What shall be done to stay this terrible evil? What the means and remedies? The answer is given: Abstain from intoxicants of every description, as this is an infallible cure and the only one that has stood the test of time. To one who has lost self-control this is not an easy thing to do, by any means; indeed, there are many cases so entirely wrecked that it would be next to impossible for them to emancipate themselves, unaided, from this terrible habit, which holds with a force more vice-like than any other known.

This unfortunate class need help from their sober-minded brethren. They need treatment, it is true, but not to rid them of disease produced from "obscure physical causes." There is no sense in hunting for "obscure causes" when *liquor* is seen to be wrecking every one, on every hand, who dares to contest its strength.

The treatment they need, and the only kind that will meet the case, is to remove them beyond the influence of this mighty destroyer. How to do this, then, is the practical question, and one that comes home to every lover of his race. Many good people are now engaged in trying to solve this problem.

One way to meet the case, and it appears quite practicable, is for the general Government to establish one or more inebriate asylums in every State, or enough, at any

rate, to satisfy the demand. Let these asylums be regulated on the same plan as insane and other asylums, and receive their patients under the same rules as adopted by those institutions. Once within the asylum walls the toper would be free from his besetting vice, and under a little judicious toning up, in most cases, would soon realize the true state of the case—a thing not appreciated by him for weeks, may be for months and years before.

This treatment is in accordance with the doctrine, remove the cause and the effect will cease, and it certainly is a very sound, common-sense principle. Should other expedients be found necessary in connection with this place, the double-chloride-of-gold treatment—whatever that may be—could be tried. Not having had any personal experience with that particular medication, of course it is not herein endorsed, but it may be said, however, that reformed inebriates who were subjected to the treatment speak in the highest terms of its success. Very likely it acts on the principle of breaking a dog from sucking eggs by giving him, along with them, some tartar-emetic.

Another plan that will mitigate the evils of intemperance is to raise the liquor license so high as to practically strangle the traffic, and let it die a slow but tolerably sure death. Failing in these, the more radical plan of prohibition could be tried as a *dernier ressort*. The adoption of one or more of these plans, it is confidently believed, would meet the case, and save further trouble on the score of the "obscure physical cause" theory. It is hoped the questions have been answered, if not to the satisfaction of the doctor, at least in accord with the dictates of common-sense, which, after all, is a most excellent guide to follow, and will very surely lead one out of the inebriate muddle.

B. F. HART, M.D.

BROWNSVILLE, MO.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 23, 1883, to June 30, 1883.

SMART, CHARLES, Major and Surgeon. Assigned to duty in the office of the Surgeon-General, U. S. Army, and in addition to his duties in the Surgeon-General's Office will continue to serve as a member of the National Board of Health. S. O. 147, par. 8, A. G. O., June 27, 1883.

BIART, VICTOR, Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Sisseton, D. T. S. O. 102, par. 1, Department of Dakota, June 13, 1883.

WINNE, CHARLES K., Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Winfield Scott, California. S. O. 69, par. 1, Department of California, June 19, 1883.

WORTHINGTON, JAMES C., Captain and Assistant Surgeon. Assigned to duty at Cantonment, on the Uncompahgre, Colorado. S. O. 128, par. 4, Department of the Missouri, June 21, 1883.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Cœur d' Alêne, and assigned to duty as post surgeon at Fort Lapwai, Idaho. S. O. 81, Department of the Columbia, June 14, 1883.

STRONG, NORTON, First Lieutenant and Assistant Surgeon. Relieved from operations of S. O. 42, par. 2, C. S., Department of the Platte, and assigned to duty with Battalion of Infantry now on duty between Forts Thornburgh and Bridger, Wyoming. S. O. 83, par. 2, Department of the Platte, June 21, 1883.

To be Assistant Surgeons with the rank of Captain, after five years' service, in accordance with act of June 23, 1874: Victor Biart, William W. Gray, Louis Brechemin, Louis A. LaGarde, Junius L. Powell, Assistant Surgeons, June 6, 1883. A. G. O., June 25, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending June 26, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 26, 1883	0	11	61	4	87	39	0	0
July 3, 1883	0	7	74	6	91	20	0	0
Deaths.								
June 26, 1883	0	9	16	4	18	11	0	0
July 3, 1883	0	3	23	9	22	16	0	0

GOOD ADVICE TO TRAVELLERS IN NEED OF MEDICAL ADVICE.—Dr. C. W. Chancellor, in a recent letter from Geneva to the *Baltimore Day*, gives the following excellent advice to European travellers: "I feel I would be but ill acquitting myself of a duty were I to fail to administer an admonition to those of my compatriots who may one day journey into this land, and I hope they will take heed to what I say, for it is wholesome. I would strongly advise Americans who contemplate travelling upon the continent to be very chary of patronizing physicians recommended by *hotel or boarding-house keepers, concierges, porters*, etc., etc., without first having inquired of their consul or their banker, or some friend as to the standing of the party recommended, for it not infrequently happens that these parties plot together exclusively as a matter of personal gain, and without any regard whatever for the well-being or interest of those whom they advise. It would be well for persons visiting Europe either to obtain the addresses of competent medical men in the various cities they propose visiting before leaving home, or on their arrival to get advice from some reputable person *out of business and above taking a commission*, otherwise they may have a tenth-rate doctor introduced as the 'former physician to the emperor,' the 'chief of the hospitals,' the 'doctor of the American Legation,' or some other high-sounding but fictitious title, and they may be left in his hands to be robbed, maltreated, and perhaps murdered. Travellers, in fact, should *make it a rule to take any other physician than the one proposed* by a landlord or concierge or courier, unless the medical man thus recommended *be a compatriot, or is endorsed by some disinterested person;* and they should *insist* upon having the doctor of their choice—if they have a choice—*really sent* for, taking no excuse for any delay or neglect in regard to the matter. There are reliable and *veritable* American physicians in nearly all the large cities of Europe whose addresses can readily be found by consulting the *Directory*, which is in the office of every respectable hotel, or by inquiring at the nearest drug-store."

YATES COUNTY (N. Y.) MEDICAL SOCIETY.—At the annual meeting of the Yates County Medical Society, held in Penn Yan, on Tuesday, June 5th, the following gentlemen were elected officers for the ensuing year: *President*, Benj. L. Holt; *Vice-President*, D. M. Smith; *Secretary*, C. C. Harvey; *Treasurer*, John Maloney. The New Code was adopted by the Society unanimously.

ASYLUM SUPERINTENDENTS IN SESSION.—The thirty-seventh annual meeting of the Association of Medical Superintendents of American Institutions for the Insane was opened at Newport, R. I., June 26th. Dr. J. H. Collender, of Nashville, Tenn., presided, and thirteen States, the District of Columbia, and the Provinces of

Quebec and New Brunswick were represented. Dr. H. R. Storer, President of the Newport Medical Society; Dr. Foster Pratt, of Kalamazoo, Mich., and Dr. Darius, of the Willard Insane Institution at Ovid, N. Y., were presented to the Association. It was voted to invite the members of the medical profession of Newport and the vicinity, and the surgeons of the navy in that port to be present at the sessions of the Association. The following officers were elected: *President*—Dr. John P. Gray, of Utica, N. Y.; *Vice-President*—Dr. Pliny Earle, of Northampton, Mass. The president then delivered an address.

PLENTIFULLY SUPPLIED WITH DOCTORS.—According to a late estimate, Atlanta, Ga., has one physician to every 277 of its population, or one to every 156 of its whites, and one to every 121 of its colored population.

THE WARREN TRIENNIAL PRIZE.—We wish to draw attention to the Warren Triennial Prize for 1886. The subject for the present year was "Chronic Bright's Disease (parenchymatous and interstitial nephritis);" "The Nature and Mutual Relations of the Derangements in the Circulatory and Secretory Organs." No award, however, has been made. Beyond that fact we are not informed as to the character or number of articles presented for competition. It is to be supposed that the terms were too restricted to draw out any great number of articles. No complaint can possibly be made as to the narrowness of the subject for 1886. The terms of the competition are such as to give the widest latitude to literary or scientific medical men, the prize being offered for a dissertation on "some subject in physiology, surgery, or pathological anatomy." The amount of the prize, $450, and the wide range of subjects, ought to bring out work of a high order of excellence. This is, we believe, the largest prize offered in this country for general competition, and the physicians and surgeons of the Massachusetts General Hospital are, *ex officio*, the committee who have the matter in charge.—*Boston Medical and Surgical Journal.*

RESOLUTIONS ON THE DEATH OF DR. JAMES L. BANKS.—At the stated meeting of the New York Pathological Society, held June 27, 1883, the following resolutions were unanimously adopted:

Whereas, It has pleased God to remove from this world the soul of our late associate, James L. Banks, M.D.;

Resolved, That we sympathize with his family in the great loss which they have sustained.

Resolved, That we cherish his memory as that of an intelligent and wise physician, a kind and genial companion, and a conscientious, upright, and honorable man.

Resolved, That a copy of these resolutions be forwarded to the family of our deceased associate, and that they be published in the medical journals of this city.

ALFRED C. POST,
CHARLES K. BRIDDON,
JOHN H. HINTON,
} *Committee.*

PHYSIOLOGY AT OXFORD.—The sum of $50,000 has been voted for the erection of a physiological laboratory for Dr. Burdon-Sanderson at Oxford.

THE HARVEIAN ORATION was delivered this year (June 27th) by Dr. Habershon.

HYPOPHOSPHITES AND CHILDREN.—Dr. H. Cullimore thinks that the hypophosphites should not be given to children between the ages of four and seven if they are at all precocious and inclined to too much mental activity.

THE APPOINTMENT OF GENERAL ALEXANDER SHALER to succeed Professor Chandler as President of the City Board of Health is well received. It remains to be seen whether he will have the courage to protect the city's sanitary interests against the politicians.

THE OPENING OF THE JOHNS HOPKINS MEDICAL SCHOOL.—The trustees of the above institution design to begin some work in the medical school without waiting for the hospital to be finished. With this purpose in view, Dr. Remsen has been designated Professor of Chemistry, Dr. Martin of Physiology, and Dr. Billings of Hygiene. A chair on Pathology will be filled soon, and lectures will begin October 1st.

THE PHILADELPHIA POLYCLINIC has with great enterprise secured an organ. The *Medical Register* will assume the name of *The Polyclinic* (with a y) and will supply the long-felt want for a monthly medical journal in Philadelphia.

THE EDINBURGH MEDICAL SCHOOL.—One thousand guineas have just been voted by the Town Council of Edinburgh, toward the building fund for the new Medical Department of Edinburgh University. These new buildings, which are nearly completed, are extensions of the old, and will greatly increase the advantages of the school.

A MODEST TRIBUTE TO PASTEUR.—The *Publicateur*, a journal published in the arrondissement of Meaux, contains the following poetical tribute to Pasteur: "M. Pasteur has the glory of being the first to bring knowledge out of mystery and make it irradiate through the Department of Seine-et-Marne; and every sheep which grazes upon the fields sings the glory of the master, and of science!"

TRICHINOSIS FROM EATING HORSE-FLESH.—Several Austrian journals report the case of a woman who suffered from trichinosis, caused, it is claimed, by eating horse-flesh. The subject is being investigated.

WANDERING LIVER IN A MAN.—At the meeting of the Society of Physicians of Vienna, June 4th, Dr. Felix Schwarz showed a case of wandering liver in a man, a very great pathological rarity. There have been only two cases in men and thirteen in women reported.

CHLORINE WATER IN DIPHTHERIA.—Dr. Caroline R. Conkey, of Watertown, N. Y., sends us a very enthusiastic description of the value of chlorine water in diphtheria. She writes: "In a late number of THE MEDICAL RECORD, Dr. Binz, of Bonn, is quoted as predicting that a remedy would surely some day be found which should prove as effectual a specific antidote to diphtheria as salicylic acid and quinine are to rheumatism and malarial fever. Such an antidote, I believe, we already possess in chlorine water.

"The importance of this agent was first brought to my notice by Dr. Marshall Calkins, of Springfield, Mass., to whom, I believe, the credit of discovering this application of chlorine water is due. Since then I have used it with unfailing success in every case of diphtheria that has come under my notice; and claim its absolute efficiency in curing the disease, provided, always, it can be dealt with in the first stage; *i.e.*, before the membrane extends into the larynx. My plan of treatment is as follows: Fresh chlorine water must be made every day according to the following formula:

℞. Potass. chlor ..... ʒ ij.
Acidi muriatici ..... ʒ j.
Aquæ ..... ℥ viij.

Into an eight-ounce bottle put the chlorate of potash; on this pour the acid, and cork as quickly as possible to prevent the escape of the gas. Add the water as hot as convenient, at intervals. Dose: tablespoonful in an ounce and a half of water, to be gargled and swallowed every half hour in a severe case.

"This dose may be swallowed without gargling, if, for any reason, that is impossible, and may be sweetened to render it palatable to a child. The interval between the doses may be lengthened, according to the discretion of the physician; in milder cases, being given every one, two, or three hours, as indicated. When the membrane extends into the nose or posterior nares, syringe with the same solution.

"This constitutes my entire treatment, and its success

is invariable. I insist upon the most nutritious diet. Every two hours nourishment in some form is given; and an even temperature of about 70° F. constantly maintained in the sick chamber, together with the most thorough ventilation."

The history of an illustrative case is given.

[While we have no doubt of the efficacy of chlorine water, it is necessary to remind our correspondent that clorine water has been used before in diphtheria, and that the same claims which she makes for it have been made for a large number of other substances—and still diphtheria exists and kills. We are inclined to think that the case whose history is given was one of follicular inflammation rather than diphtheria.—ED.]

"MUSCLE *v.* BRAIN."—This popular heading aptly illustrates the misconception that prevails in result of ignorance of the laws of physiological development. It is a radical error to suppose that one part of the organism can be or ever is developed "at the expense" of some other. One part may be neglected while attention is exclusively directed to another part, but the fault does not consist in the overcare of the one, but in the neglect of the other. It is important to recognize this, because the phrase "muscle *v.* brain" would seem to imply that if we have muscle we cannot have brain. It is needless to remind those who understand the physiology of the higher animal life that no such alternative is presented. Each and every part of the body grows as it feeds. The point which is too commonly forgotten is that it feeds as it works, and in that proportion only. If any part is unexercised, it cannot possibly be nourished in such manner as to produce full growth and good health. In the training of youth it is especially necessary to bear this in mind. To produce good brain tissue there must be good brain exercise. The work done should not be sufficient to exhaust the organ, or the faculty of recuperation will be itself weakened and exhausted, and then the function of repair will lag behind the function of special activity, with the result of deterioration instead of progressive development. The work done should not, as a matter of fact, exceed such limits as regards quantity or quality as shall suffice to stimulate growth without exhausting. An overburdened or overworked brain cannot be healthy, nor can one that is underworked. Fatigue—we mean mental weariness—should not be incurred by the young; that is, during the period of development. The same rule applies to muscle cultivation. Full exercise without exhausting fatigue is the best, and, indeed, the only, stimulant of growth. Other things being equal, the best organism, the healthiest man, will be one in which both brain and muscle have been developed side by side by a process of educationary training in which time and strength have been so utilized as to afford opportunity for growth in every direction, in what we call *mind—i.e.*, brain function—as well as in physical strength or muscle function. After the organism has passed through the stage of growth, and its several parts have been finally formulated, there may come a time when muscular activity will so drain the strength as to impoverish the brain; but this state of matters is not reached until long after the educationary period, and in a well-trained organism it will never be reached at all.—*The Lancet.*

TRANSFERRED IMPRESSIONS.—Dr. Joseph A. Stillwell, of Brownstown, Ind., writes: "Your editorial on 'Telepathy,' of May 26th, reminds me of an experiment I made on a young man with delirium tremens. I was alone with him in the night. He had stepped out at the door to a vine trellis and was picking at the vines as if he was searching for something. I concentrated my mind on him with a strained effort. He raised from a partial stoop and asked me, 'What do you want?' He was about thirty feet away, and could not see me, nor did I make any noise. He was outside, and I in the house. His voice broke my effort for a second or two when I renewed my attention with all the power of concentration I could command. He then in a sudden move and with some impatience asked me 'What do you want?' again, and turned and did take a step or two toward me, but left his purpose and lapsed off. I again gave him all my attention, when, like the others, just at its culmination, or what seemed to be, he gave me his sudden attention and said, with some vehemence, 'What are you calling me so much for?' This might have all *happened* only, but there was such an exact synchronous motion on his part in response to my intense action, that I have always felt that I reached his mind with only this mental act of mine. So much so, that, particularly when he said 'calling,' I felt an alarm come over me at my success that disqualified me for further effort. That was twenty-seven or twenty-eight years ago, when I was a medical student. Since that I have never met with a case and surroundings, that I thought justified a renewal of the experiment. And while I have never regarded it as concluding anything, now offer it in this connection."

BROKEN THERMOMETERS.—In the matter of broken thermometers, it is evident, we have raised a ghost that we cannot lay. Dr. G. L. Chapman, of Polo, Ill., writes: "I took my thermometer-case to a jeweler and got a small hole drilled through the bottom below the cavity of the case and tied a small black elastic cord securely to the *bottom* of the instrument and the other end to a safety-pin. The cord being attached to the *bottom* need not be more than twice the length of the case, and all disappears when the instrument is returned, if carried in the upper vest-pocket. The cord is lighter and cheaper than a chain, and does not wear the pocket; it does not require a metallic case and staple to secure its attachment, and is, I think, every way preferable."

AN ARRAIGNMENT OF AMERICAN VETERINARY SURGEONS.—A person who called himself a veterinary surgeon read a paper recently before the New York Farmers' Club, in the Cooper Institute, on the diseases of cattle and their treatment by veterinary doctors, whose methods he condemned. There were, he said, on the farms of the United States in June, 1882, 10,357,981 horses, valued at $1,035,798,100; 1,812,932 mules, valued at $181,293,200; 993,970 oxen, valued at $49,698,500; 12,443,593 milch cows, valued at $321,089,725; 22,488,590 other cattle, valued at $562,214,750; 35,191,156 sheep, valued at $527,867,340, and 47,683,951 swine, worth $476,839,510, making a grand total of the value of dumb animals on farms in the country, $3,154,821,125. This estimate, however, the lecturer considered by far too low, and he felt certain that the value of dumb animals in the United States was about seven billions of dollars, judging from the fact that some animals are held at $50,000, as in the case of Damascus, just sent by John W. Garrett, of Baltimore, to the King of Italy. It is a disgrace to the nation, the orator continued, that there is not one legally chartered, organized, and established veterinary college in the country. Veterinary science here lies deep down in the ditch of ignorance, and the billions of dollars invested in animal property, as well as the animals themselves, are left to the mercies and wantonness of chance. The country is flooded with bogus diploma mills, several of which are in this city and other parts of this State. The speaker went on in the above strain, but failed to mention where the New York diploma mills are. It is understood that parties in this city do practically sell veterinary diplomas, and it is to be regretted that some definite facts were not given.

THE REGULATION OF PROSTITUTION.—The Municipal Council of Paris has lately addressed a letter to the Prefet, demanding the immediate confiscation of the Lourcine and Midi Hospitals, and the abolition of all the *maisons de tolérance* in the city and the Department. More recently they have voted the suppression of compulsory examination and treatment of women, and the abolition of the *police des mœurs* is under discussion.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 2 NEW YORK, JULY 14, 1883 Whole No. 662

Original Articles.

INFUSION OF JEQUIRITY, OR LICORICE BEAN,[1] IN INVETERATE PANNUS,

WITH A REPORT OF SEVERAL SUCCESSFUL CASES.[2]

BY EDWARD S. PECK, M.D.,

SURGEON TO THE EYE AND EAR DEPARTMENT OF THE NORTHWESTERN DISPENSARY; VISITING SURGEON TO THE OPHTHALMIC DIVISION OF CHARITY HOSPITAL, NEW YORK.

THE treatment of chronic granulations and sarcous outgrowths of the conjunctiva and cornea has always been a chapter of great interest to the physician and the patient. It has elicited the efforts of the best surgeons of every country where affections of the lids and eyeball prevail. In England, Germany, and the United States clinical work in this department has been displayed from different standpoints. Within the past few years the direction of applied effort has been in the establishment of an acute ophthalmia in lieu of the chronic proliferous catarrh of these structures. Chronic trachoma of the eyelid and inveterate pannus of the cornea are the result of the same pathological processes, differing only in location, but amenable to the same remedial agencies. It will seem a strange statement, that a structure of so low an organization as the cornea should be involved in the same pathological processes as one of so high a type as the conjunctiva. The cornea serves at once the function of confining and protecting the contents of the eyeball, and at the same time of refracting the first rays of light which are transmitted to the dioptric system; while the conjunctiva, rich in nerves and blood-vessels, serves merely as a lubricating and protective layer.

It cannot be denied that the inoculation of eyes with pus of various purulent ophthalmias has taken a more and more prominent place in ocular surgery. It is well known that the measure of success of the experiment is, within limits, determined by the activity of the inoculation. The experiments of Critchett, Lawson, and Bader in London, of Warlomont in Brussels, of Abadie and others in Paris, are entitled to highest praise in view of their successes; while, at the same time, the procedure will always be unpopular on account of the severity of the resulting inflammation and the natural repugnance of the patient and operator. Such experiments ought to be conducted only where a large number of trachomatous patients are aggregated, and when there is a small per centum of operations on the eye.

The report for 1881 of the Ophthalmic Division of Charity Hospital, Blackwell's Island, gives details of the favorable results of six experiments in inoculation, conducted by the author of this paper, the first case of the series having been presented as a contribution to this Society at its semi-annual meeting in 1881, and published in THE MEDICAL RECORD, July, 1881. Although I hold to the same opinions as to the efficacy of this treatment, as a *last resort* in all cases of inveterate pannus, yet I welcome the proposition of any new remedy, whether of the mineral, vegetable, or animal kingdom, which shall do away with the immense risks to the patient, the surgeon, and the nurse, in the establishment of an artificial purulent ophthalmia. Various aromatic infusions, and hot medicated compresses have been used for this purpose, but they all lack intensity and duration. The present agent, which I show you in seed and infusion, is known by the botanical name of abrus precatorius, of Linnæus' classification; the seed is called licorice bean (not the licorice known in commerce); and in Brazil, where it has been used for years in ophthalmic practice, the seed is called *jequirity* (Fr.). The literature, all of which I have at hand, with the exception of the first article, written in 1867 in Brazil, is very meagre. This article was a brief memoir, in the Portuguese language, calling attention to the dangers connected with its use in eye-practice. I may add, that I hope not only to secure this initial article on the subject, but to interest the Secretary of State at Washington, with the view of procuring all the native medical and lay testimony upon the use of the infusion in ophthalmias in Brazil. If we have here an agent which, in the majority of cases, will prevent blindness and helplessness as a result of inveterate pannus, it is an object of popular charity to acquaint ourselves with its history, preparation, and application.

The infusion has been prepared of various strengths. That used in the Northwestern Dispensary and Charity Hospital, New York City, was prepared as follows: Take of the *fresh* seeds 32, or 3.2 grm.; macerate in 500 grm. (16⅞ ʒ) of cold water for twenty-four hours; add 500 grm. of hot water; when cold, filter, and preserve in well-stoppered, dark-colored phials. When fresh the solution should be clear and odorless; after standing a few days it becomes opalescent, and, what the literature in every instance fails to mention, it acquires a brackish, mawkish odor. In an experience of seventeen cases I have found that if the solution be made from old seeds, or if from fresh seeds and it has stood longer than two weeks, it loses its irritative character and will have no effect whatever. I am disposed to think that an increase of jequirity does not imply an increase of effect, so that the question of preparation becomes purely one of pharmaceutics; that is, as to how much water, whether warm or cold, and if both, how long shall the seeds remain in each? Shall the whole seed be used after being bruised, or only the cortex, cotyledon, or gemmule? The liability to fermentation is so great that it has been proposed to use a germicide in the solution—as salicylic acid, hydrate of chloral, or carbolic acid—a proposition to which, I think, a good chemist would object.

The rationale of treatment is that which obtains in inoculation, viz.: the establishment of an active purulent ophthalmia in place of a chronic, granular ophthalmia, with a view to carrying off the products of the granular conjunctivitis or keratitis: to such the name *jequiritic ophthalmia* could very properly be given. The first recent clinical use of jequirity was made by de Wecker, of Paris, whose report was published in the *Annales d'Oculistique*, for July and August, 1882. A translation of this report appeared in *The Planet*, a new medical gazette of New York, in January, 1883. Moura Brazil published an article on the treatment of acute and chronic granular conjunctivitis with jequirity in the *Annales d'Oculistique* in November, 1882, in which he detailed experiments on rabbits and patients; he found that granulations of the conjunctiva became diminished and sometimes were obliterated. Moyne followed with a paper on artificial purulent ophthalmia produced by abrus precatorius, in the *Boll. d'Ocul.*, vol. v., No. 3,

[1] Abrus precatorius, Linn

[2] Read before the Vermont State Medical Society, convened in Rutland, Vt., June 13, 1883.

November, 1882. He was the first experimenter in Italy. The patients were three children, in one of whom the trachoma was entirely removed in twenty days; in the other two the process was milder, but met with a like success. The cornea was not pannous in any of the cases. Simi had an article in the same journal in December, 1882. Jequirity infusion was used on two patients; inflammation and discharge followed, and on the twelfth day the process was complete. On one eye in total, on another in partial staphyloma, there was no change whatever. In the second patient the granulations were decreased, and the patient affirmed improvement in sight. Terrier detailed his use of jequirity before the Soc. de Chirurgie, séance du 13e Décembre, 1882, in a case of trachoma; purulent conjunctivitis followed, but the granulations did not disappear.

The first published use of jequirity in this country, so far as I can learn, was by Dr. Gruening, whose sketch of two cases may be found in THE MEDICAL RECORD, March 17, 1883. These cases were admitted to the ophthalmic services of the Mount Sinai and German Hospitals of New York, and were perfect successes.

Dr. P. Callan has used the infusion at the New York Eye and Ear Infirmary on three cases without any effect. His cases, so far as I know, have not been published. An exceedingly interesting article from the pen of Mr. Charles Rice, associate editor of *New Remedies*, New York City, appeared in the June (1883) number of that journal, giving the curious history of the seeds, as well as the botanical and pharmaceutical properties of the plant. My own experience of seventeen cases comes next; and, aside from the two cases of Dr. Gruening's and three of Dr. Callan's, I know of no other use of the infusion in ophthalmic practice in this country.

It will be observed that Mr. Rice describes a different preparation of the infusion from that given above, which is the method followed out by Wecker and Gruening. The symptoms formulated by Mr. Rice are more severe than any of my cases developed. All of my patients were treated in the following way: Once a day the solution was applied to both inner lid-surfaces with a camel's-hair brush; the application is painless; two drops were ordered to be instilled into the eye every three hours; and all the patients who would devote the time and thought to the applications, applied compresses throughout the day and a part of the night. In a majority of the cases alteration was noticed within thirty-six hours, and consisted in an acute conjunctivitis followed by discharge, and the deposit of a croupous membrane upon their inner surfaces. The lids were swollen, and the eyes sustained the characteristic symptoms of an acute blennorrhœic conjunctivitis. Within from four to six days the inflammation began to abate, the infiltration of the lids to subside, and the membrane to disappear in shreds. The process of repair was hastened by one daily application of a five-grain solution of nitrate of silver, while a saturated solution of boracic acid was used at frequent intervals to keep the surface as clean as possible. The success in some of the cases was marvellous. The cases first undertaken were dispensary patients, three in number, every one of whom was cured of long-standing pannus. Two private patients, one very young, the other in middle life, were likewise cured—all five within a fortnight; the other twelve succeeded in a less degree, while the conditions of treatment were better fulfilled than obtained with the first five, these twelve being confined to a hospital with a complement of staff physicians and trained nurses.

The following conclusions are formulated from an experience of seventeen cases:

First.—The infusion must be from *fresh* seeds, transparent, odorless, kept from air and light; and must not be used after the development of an odor, or later than a fortnight after its preparation.

Second.—The ophthalmia induced by jequirity is strictly croupous; is limitable in severity by the assiduity and regularity of the applications, and is not determined by the strength of the infusion.

Third.—The cornea runs no risk of perforating ulcer, and can suffer no more than a transient desquamation of epithelium.

Fourth.—Corneal and in some instances conjunctival granulations from one year to twenty years of existence are successfully removed, with but little pain and little discomfort, in from ten to twenty-one days.

Fifth.—A dense white opacity of the cornea, even of recent standing, remains unaffected by the infusion of jequirity.

It will be observed that in some respects these conclusions differ from those of Wecker, but essentially they are the same.

The following cases are here represented in tabular form:

CASE I.

Patient.	*Diagnosis.*	*Treatment.*
Male, aged twenty-eight; occupation, carpenter; treated at Northwestern Dispensary. Improvement in vision twentyfold.	Pannus and conjunctivitis granulosa for ten years. Vision in either eye, finger-counting at four feet.	Infusion of jequirity begun March 4th. Applications painless, but irritating. On third day profuse blennorrhœa, both corneæ covered with a deposit of sarcous tissue. On fifth day corneæ began to clear; discharge less. On tenth day discharge ceased. On fourteenth day patient was dismissed with V = $^{20}/_{60}$ in each eye.

CASE II.

Woman, aged twenty-five; chambermaid; treated at Northwestern Dispensary. Improvement in right eye thirty-fold; left eye fifteenfold.	General, dense pannus for twelve years. Inversion of four lids, due to fibrous scars on their inner surfaces. Stubby and vicious growth of lashes; bands of symblepharon of both eyeballs. Upper lids had been operated on with benefit for entropion. V = finger-counting at two and four feet.	Infusion of jequirity begun March 3d. Applications painless, but during treatment eyes became painful. On second day free discharge, increase of pannus; later patient was led to the dispensary. On tenth day cornea clear. V = $^{20}/_{70}$ with either eye.

CASE III.

Girl, aged eleven; treated at Northwestern Dispensary. Vision in each eye quadrupled.	Partial thin pannus; cornea steamy, not fleshy; trachoma like frog's spawn on all four conjunctival surfaces.	Infusion of jequirity begun March 28th. Little blennorrhœa and little pain; infusion continued twenty days. Cystic bodies of trachoma (?) removed from all the conjunctival surfaces by the infusion.

CASE IV.

Lad, aged eighteen; occupation, apprentice to a decorative painter; private patient. Vision in each eye doubled.	Superior pannus of both eyes for more than ten years; trachoma of all the lids. Right eye, V = $^{20}/_{70}$; left eye, V = $^{20}/_{100}$.	Infusion of jequirity begun April 1st. Mucous discharge at the end of second day. Lachrymation, spasm, and photophobia considerable. On tenth day right eye had V = $^{20}/_{40}$, left eye had V = $^{20}/_{60}$.

CASE V.

Female, aged forty-seven; had always lived at home; since widowhood a housekeeper; private patient. Improvement in V = eightfold.	Interior pannus of right eye for a number of years, extending up to the horizontal diameter of the cornea. V = finger-counting at eight feet.	Infusion of jequirity begun May 23d. On the third day the cornea was covered with new vessels; blennorrhœa profuse; strips of muco-purulent discharge; no pain; no smarting; lids infiltrated and shiny. On nineteenth day V = $^{20}/_{70}$.

CASE VI.

Male, aged twenty-three; shoveler of sand; treated at Charity Hospital. Improvement in V = right eye, doubled; left eye, none.	Diffuse, dense pannus for five months; trachoma for seventeen years. Right eye, V = $^{1}/_{80}$; left eye, V = $^{1}/_{80}$.	Infusion of jequirity begun May 20th. Reaction slight; some discharge on second day; continued for eight days. On twentieth day, for right eye, V = $^{1}/_{60}$; for left eye, V = $^{1}/_{80}$.

CASE VII.

Male, aged forty; laborer; treated at Charity Hospital. Improvement in V, doubled.	Dense, fibrous pannus for thirty years. Right eye, V = $^{1}/_{80}$.	Infusion of jequirity begun May 20th; reaction slight. On twentieth day V = $^{1}/_{40}$.

CASE VIII.

Lad of seventeen years; worker in a plaster-mill; treated at Charity Hospital. Improvement in V; right eye, none; left eye, threefold.	Maculæ of both corneæ, with recurrent moderate pannus for five years. Right eye, V = $^{20}/_{80}$; left eye, V = $^{10}/_{80}$.	Infusion of jequirity begun May 20th. On second day slight discharge; on third to eighth day increase of discharge. On twentieth day, for right eye, V = $^{20}/_{80}$; for left eye, V = $^{10}/_{80}$.

CASE IX.

Patient.	*Diagnosis.*	*Treatment.*
Male, aged twenty-eight: occupation, machine-tender; treated at Charity Hospital. Improvement in V = double in each eye.	Slight, diffuse pannus; and superficial keratitis for nineteen months. Right eye, V = $^{20}/_{60}$; left eye, V = $^{20}/_{120}$.	Infusion of jequirity begun May 20th; reaction slight. On twentieth day, for right eye, V = $^{20}/_{30}$; for left eye, V = $^{20}/_{60}$.

CASE X.

Lad of twelve years; was at school at the Catholic Protectory for eighteen months; treated at Charity Hospital. Improvement in V; right eye none; left eye quadrupled.	Dense pannus crassus of both eyes; profuse discharge; blepharospasm, and photophobia; duration, eighteen months. Right eye, V = inability to count fingers at six inches; left eye, V = $^{1}/_{60}$.	Infusion of jequirity begun May 20th; reaction slight; some conjunctival chemosis and infiltration of lower lids. On twentieth day, for right eye, V = the same; for left eye, V = $^{4}/_{60}$.

CASE XI.

Male, aged fifty; laborer; treated at Charity Hospital. Improvement in V = double for each eye.	A recurrent thin sarcous pannus for eight years in both eyes. Right eye, V = $^{20}/_{120}$; left eye V = $^{20}/_{80}$.	Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $^{20}/_{60}$; for left eye, V = $^{20}/_{40}$.

CASE XII.

Male, aged twenty-two; stoker; treated at Charity Hospital. Improvement in V = double for right eye; none for left eye.	A dense, inveterate pannus of each whole cornea for eight years. Right eye, V = $^{5}/_{200}$; left eye, V = $^{20}/_{200}$.	Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $^{10}/_{200}$; for left eye, V = $^{20}/_{200}$.

CASE XIII.

Male, aged thirty-six; longshoreman; treated at Charity Hospital. Improvement in V, for right eye = double; left eye = = treble.	A variable pannus crassus for eighteen years; very dense on entering the hospital. Right eye, V = $^{1}/_{60}$; left eye, V = $^{1}/_{60}$.	Infusion of jequirity begun May 20th. On twentieth day, for right eye, V = $^{5}/_{60}$; for left eye, V = $^{5}/_{60}$.

CASE XIV.

Female, aged thirty-five; domestic; treated at Charity Hospital. Improvement moderate.	Right eye: A variable pannus crassus in superior portion of cornea; dense leukoma of the inferior portion of cornea, V = perception of moving objects. Left eye: Leukoma corneæ, phthisis bulbi; total blindness.	Infusion of jequirity begun May 20th; Reaction slight. On twentieth day, for right eye, V = finger-counting at two feet; leukoma untouched; left eye unaffected by the infusion.

CASE XV.

Female of thirty years; scullery-maid; treated at Charity Hospital. Improvement of V = tenfold in each eye.	Pannus of both corneæ; granular conjunctivitis of four lids for several years. Right eye, V = $^{6}/_{200}$; left eye, V = $^{10}/_{200}$.	Infusion of jequirity begun May 24th. Reaction severe, beginning on third day. Blennorrhœa, swollen lids, but no pain. On fourteenth, for right eye, V = $^{20}/_{60}$; for left eye, V = $^{20}/_{40}$.

CASE XVI.

Female, aged twenty-two; prostitute; treated at Charity Hospital. Improvement of V = fourfold.	Pannus of upper cornea of left eye for five years. Syphilitic cachexia; patient anæmic and scarred; looked old. V = $^{20}/_{200}$.	Infusion of jequirlty begun May 20th. Reaction slight. Patient not obliged, except for treatment, to go to bed. On twentieth day, V = $^{20}/_{60}$.

CASE XVII.

Male, aged twenty-five; laborer; treated at Charity Hospital. Improvement in V, right eye = eightfold; left eye = fourfold.	Dense pannus of both upper corneæ for many years; patient syphilitic, though had never had iritis. Right eye, V = $^{10}/_{200}$; left eye, V = $^{5}/_{200}$.	Infusion of jequirity begun May 20th. Reaction not severe; began on fourth day, and continued two weeks. On twentieth day, for right eye, V = $^{20}/_{50}$; for left eye, V = $^{20}/_{200}$.

I am under obligations to Dr. Amory Chapin for assistance in the care of the cases treated at the Northwestern Dispensary; also to Drs. Battle and Leipzinger, House-Surgeons at Charity Hospital.

53 WEST FIFTIETH STREET, NEW YORK.

THE ARTIFICIAL CULTIVATION OF VACCINE.—A prize of $500 is offered by the Company of Grocers, London, to any one who will describe "a method by which the vaccine contagium may be cultivated apart from the animal body in some medium or media not otherwise zymotic—the method to be such that the contagium may by means of it be multiplied to an indefinite extent in successive generations, and that the product after any number of such generations shall (so far as can within the time be tested) prove itself of identical potency with standard vaccine lymph." Competitors must send in their treatises on or before December 31, 1886, and the award will be made not later than May, 1887.

THE INABILITY TO DISCRIMINATE BETWEEN RIGHT AND WRONG DISGUISED BY AUTOMATISM.

ILLUSTRATED BY THE DISASTERS TO THE BRAIN, TROPHIC AND FUNCTIONAL, ARISING FROM CHRONIC ALCOHOLISM.

BY T. L. WRIGHT, M.D.,

BELLEFONTAINE, O.

A RECENT experience with respect to a trial for murder in one of our large cities has impressed upon my attention the importance of a clear understanding of the full significance of the questions so often propounded by lawyers when applied to criminals: "Could the prisoner, in your opinion, discriminate between right and wrong? Did he know, when he committed the act, that he was doing wrong?" The importance of a perfect familiarity with all the terms in these questions, as applied to ascertained facts in criminal cases, is the more apparent when it is remembered that they contain what the courts in England and America insist shall be considered as the real and only test of legal responsibility—the power of discriminating between right and wrong.

In order to prepare the *expert* for the questions indicated, it is usual to furnish him with hypothetical cases, wherein one side will claim a certain regular chain of sequences in the conduct of the accused, all pointing directly to the crime. The answer to the question in such an hypothesis, most likely, is that the prisoner probably did know how to distinguish right from wrong. The other side, with equal ingenuity, will furnish an hypothetical case wherein there are supposed to appear certain breaks, and unreasonable intervals, and inconsistencies, in the same chain of sequences. The same witness will decide that, in such contingencies, the prisoner did *not* know how to discriminate between right and wrong—leaving the case at last just where it was when the expert was called in to testify.

I hope to indicate that a certain regular series of sequences in approaching a criminal act, and made too in the interest of such act of criminality, is not of itself and *necessarily* proof positive that the criminal has sufficient mind to discriminate between right and wrong. Nay, I will endeavor to show that an unusually pertinacious and cunning approach to an act of criminality may even point to the presence of brain disease, which, in the form of some delusion dominating motive and will, proves by its unyielding obstinacy the absence of reason and the inefficiency of evidence, and may thus presuppose a mental defect which is incapable of discriminating between right and wrong.

I hope to make it appear that the knowledge of right, abstractly or automatically and in cold reason only—and the knowledge of wrong abstractly and by mere habit or rote—may be present, and yet the power of discriminating between the two, the power of using the reason and sensibilities in a comparison or analysis of the elements of right as relates to the elements of wrong, may be wholly absent, wholly destroyed. So that it is possible to have an abstract idea of right without feeling it, and an abstract idea of wrong without feeling it; and there may exist an utter incapacity to enter into the mental process of discriminating between the two so as to apply the results of such a discrimination to determining the character of conduct.

In illustrating these propositions, which I prefer thus to foreshadow rather than gradually approximate unto, I will consider some of the effects of alcohol upon the nervous system. I will in the first place, and in some detail, speak of alcohol as a destroying element—wrecking in many instances the integrity of the nerve-centres and of the nerve-tissue otherwise. I will then proceed to consider briefly a more common effect of alcohol, namely, its power of inhibiting nervous function; where the actual mental phenomena—those of paralysis of *function*—must appear very similar to the mental phenomena

associated with deterioration and wreckage of nerve *structure.*

Dr. Stearns, of Connecticut, says truly that many of the insane are rendered so through grief, business disasters, and other analogous causes. Yet of the whole number of persons suffering from grief and financial reverses, very few become insane. There must pre-exist some neurotic proclivity to the final mischief. So in chronic alcoholism there must also be a similar predisposition to insure the full effect of alcohol upon the tissues of the brain.

It is now the generally received opinion that about *seventy-five* per cent. of the cases of paralytic dementia have a history of alcoholism. Dr. Crothers claims that the percentage is as high as *eighty-nine.* Therefore, to fully appreciate the power of alcohol in wrecking the brain and thus depraving its functions, it is only necessary to observe closely the morbid appearances and changes which are most commonly observed in those who die of paralytic dementia.

"The nature of the most obvious initial change in the brains of the paralytic insane is a hyperplasia of the connective tissue." Certain minute changes observed in the cerebral substance of one who had suffered from this form of disease were owing, according to Dr. Maudsley, to an increase of connective tissue.

In regard to the particular kind of connective structure which is formed through the influence of alcohol, it will be proper to make one or two remarks. Alcohol is recognized as an element more prone than any other to excite the proliferation of the fibrous tissue, not only in the brain but throughout the entire system. Few structures, Dr. Bartholow remarks ("Practice of Medicine," p. 844), "escape the trophic influence of alcohol when it is habitually introduced within the body." The kidneys, the stomach, and the liver, all exhibit an hypertrophy of the connective tissue; "and the neuralgia of the brain also undergoes hyperplasia."

The peculiar nature of the fibroid adventitious structure produced under the influence of alcohol is strikingly exhibited in its subsequent changes. In the kidneys, for example, the alcoholic influence induces interstitial hypertrophy; but finally the hypertrophied tissue *contracts*, just as ordinary scars following burns or wounds contract. This contraction of the hypertrophied tissue produces interstitial nephritis. In the liver this contraction of fibrous tissue, confining and squeezing the true gland-structure among its meshes, produces hepatic sclerosis or hob-nail liver. In the brain a similar contraction produces a variety of disturbances in the condition of the capillary circulation and the nerve-fibres and nerve-cells. "As a consequence of the exuberant increase of the hypertrophied tissue, the nerve-element, as well as the delicate capillaries, are injured or destroyed," says Maudsley.

Of course, such a serious interference with the normal condition of the true nerve-cells implies a corresponding decay and deflection of mental function. It is easy to conceive of the impossibility of mental activity in healthy relationship with natural surroundings when the structures upon which such activity relies for projection—when the nerve-cells—are obstructed in function by the mechanical encroachment of an aggressive foreign substance.

But the injury done to the nerve-cells does not depend exclusively upon the pressure occasioned by hypertrophy of neighboring structure. The final *contraction* of the intrusive connective tissue, by a process of strangulation of the smaller blood-vessels, induces a failure in the proper nutrition of the nerve-element. From this defect in nutrition there often ensues various forms of cell-degeneration. Nerve-cells, for example, may undergo fatty degeneration. Becoming unfitted for physiological action, they may be absorbed, and in their place "fine elastic fibres contract, get closer and closer together, and remain as the constituent tissue of a cicatrix, which sometimes causes considerable deformity. Whole sections of nerve-substance have been replaced by a relatively small quantity of an unyielding, compact, dry tissue."

The same authority says, in another place: "As the process of hyperplasia goes on, the circulation is shut off, and the brain becomes anæmic. Pigmentary degeneration of the ganglionic cells of the brain is observed in the various forms of paralytic dementia, as also are calcareous degeneration of the same class of cells. . . . In connection with the hypertrophied tissue are amyloid and colloid corpuscles, calcareous and fatty granules, all being products of retrograde metamorphosis" (Maudsley: "Pathology of Mind," pp. 511–512).

In the same direction, Professor Loggia, of Palermo, Italy, says: "When we bring to our aid the microscope, we begin to see and to understand the intimate fibro-cellular and interstitial alterations. It is by this means we succeed in determining the vascular and perivascular lesions of the cerebral substance, the colloid and cistoid degenerations, as well as the lesions of the nerve-element—cells, tubes, and neuroglia—which have, according to the most accurate investigations, undergone great transformations in this disease."[1]

But there is still to be considered another important nerve-complication which is also brought about by the toxic power of alcohol—a complication having a very intimate relationship with the moral nature of man, and, of course, with the solution of the problems of this essay in particular.

Besides the cells and centres ministering to sensation, ideation, and motion, and besides the various avenues to and from these centres, there exists in the brain a large and important class of nerve-fibres known as *fibres of association.* To save time and space, I will here adopt the language of some authorities as found in their works on the subject.

Dr. Spitzka speaks as follows: "Many years ago attention was called to the presumptive physiological *rôle* of certain arched fibres which are known to unite adjoining as well as distant cortical areas with each other. . . . I should, if asked to point to the chief factor on which the higher powers of the human brain depend, lay less stress upon the cortical development as such than on the immense preponderance of the white substance due to the massive associating tracts. Both projecting and associating fibre masses increase in nearly a geometrical progression as we pass from the lower animals to man; but the ratio of progression of the associating fibre masses exceeds that of the projecting tracts. There are certain convolutions which are almost exclusively connected with *fibræ arcuatæ*—that is, with associating tracts—and which enjoy but little direct connection with the bodily periphera. Such cortical areas and their subsidiary associating tracts, bound into the higher unity of the entire hemisphere, constitute the substratum of the metaphysician's *ego.* A disturbance of the intricate relations which are involved in the material basis of the *ego* must be accompanied by a disturbance of the *ego*, or may even render an *ego* an impossibility."

On this subject Dr. Maudsley remarks: "The habitual co-ordination of thoughts and feelings is the basis of consciousness and personal identity. When co-ordination of function in the brain is overthrown, the consciousness of personal identity and responsibility are also destroyed."

Pertinent to the same subject, and also showing a further step in advance in the discussion of our main topic, are the words of Seppilli:[2] "We must remember that cerebral activity is manifested under two distinct aspects—that of the *conscient* and of the *inconscient.* The conscient activity, or *consciousness*, is constituted of knowledge possessed by the *ego* of its own acts—that which happens within itself, which happens in its relations with the external world. On the contrary, in the inconscient

[1] Alienist and Neurologist, July, 1882, p. 343.
[2] Ibid, April, 1882, p. 169. Translated by Workman.

activity of the brain, denominated also automatism, all those actions enter in which the *ego* takes no part nor is aware of any; but these are combined and directed so as to *resemble* those which the *ego* perceives, wills, and directs."[1]

It is therefore evident that the perfectly harmonious activity, or *consent*, of all the healthy nervous attributes and capacities is the one essential requisite to the display of sound mental function; and as such attributes and capacities are so held in activity through the integrity of the nerves of association, any disturbance or obstruction in the exercise of the functions of those nerves must give rise to serious defects in mental operation. When the interchange of nerve-influence between the various centres concerned in thought is free and unembarrassed, there is present in the mind a vivid sense of personal importance and individuality. The feelings of rights, duties, cares, and responsibilities are active, and they control all the serious avocations of life. This ever-present sense of *responsibility*, while it exacts duties, also confers power and dignity to character, and implies the freedom of the will. The sense of responsibility demands untrammelled freedom of conduct, assumes the weight of accountability, and challenges retribution. There is in the mind an acute sense of its ability to discriminate between right and wrong.

But in chronic alcoholism the free interchange and equilibrium of nervous association does not obtain. It is overcome by the intrusion of hypertrophied interstitial tissue upon the nerves of Meynert. And especially are these nerves of association injured, both in office and structure, by the final contraction of the connective tissue, which, by strangulation, annihilates their function.

Very important considerations of medico-legal interest are interwoven with the tendency of alcohol to impair brain tissue. It is easy to conceive of the unstable will, the impaired will, the imbecile will, when the *consciousness of personality* is weakened and the feeling of responsibility is lost in consequence of injury to the fibres of association. It is also easy to conceive that the power of discriminating between the qualities of right and wrong must be weakened when consciousness is defective. Unless the feeling of personal identity is clear and on the alert, it is impossible to apply personality with distinctness to conduct; impossible to perceive the relations of personality—the relations of the *ego*—to either things or acts; impossible to bring *self* into normal relationship with exact ideas of right and wrong.

It is conceded by all whose authority is of any weight, that one of the earliest symptoms pointing to the progressive paralysis of the insane is a marked change in the disposition. There is a change in the moral nature; not a change indicative of true vice, and exhibiting a reckless disregard of the principles of morality, but a change indicative of an inability to comprehend those principles, and founded, indeed, upon physical damage to the nerves and centres of association—those nerves and centres upon which the sense of morality is based, and through which the moral nature must find utterance.

There was a person within my knowledge who had been a steady drinker. He was honest and was a hard laborer. He suddenly began a course of stealing. It was not like ordinary theft. He would deliberately take and carry away with him things notoriously the property of near relatives and neighbors. He made no attempt at explanation. He claimed these articles to be his own, simply because they pleased his fancy. An infant whose associative organs have not been exercised displays the same ignorance of personality as relates to the personality of others. It cries for and claims as its own any shining toy which happens to engage its attention.

The person alluded to finally died in an insane asylum, demented. He could, without doubt, tell very well what was the abstract idea of right as well as of wrong. They were ideas which had become *habitual or automatic* with him by life-long use. But practically his nervous organs, functioning the moral nature, having been injured, he could not make an active discrimination between right and wrong. All *feeling or sense* of right and wrong was destroyed through the ravages of alcohol. He was incapacitated, by trophic changes in brain-tissue, from bringing the *conscious ego* into relationship with the moral principles of right and wrong. And this is the difference between the automatic or abstract knowledge of right and wrong, which is to some extent always present, and the *conscious and responsible capacity to discriminate* between the two principles. In the infant, the fibres of association had never yet been brought into play. In the paralytic dement, they had suffered destruction.

But in the insane criminal, the fact often stares the inquirer in the face that the conduct of the accused is consistent throughout with the theory of depravity; that all the steps in the crime were those evincing rational design. This is, indeed, a serious point of consideration. For it not infrequently happens that atrocious criminals, exhibiting the attributes of fine reason and wicked pertinacity, soon after show such indications of insanity as to leave no doubt of their entire irresponsibility.

Certain considerations carefully noted may throw some light upon these undoubted facts.

Habits of thought are acquired slowly and painfully. It is not necessary to advert at length to the difference between man and the lower animals. The former acquires by long and laborious experiment a habit of mental activity fitted for his exalted sphere; while the latter are born with instincts sufficient for their lot in life. The tedious repetition of sensations, perceptions, conceptions, and the motor activities becomes at last a habit which it is impossible to dispense with. Mental and even motor life becomes in time mere repetitions of certain long-enacted powers which are applied to the usual phenomena of living.

The power of walking erect was acquired with much consideration, balancing of the body, and mental calculation. But at length the acts of walking, running, and jumping become by use strictly automatic, requiring no nice calculation, no exercise of the judgment or will in their performance. The undoubted insane walk and run well. Yet no one would claim that because an insane man can perform the act of walking well, an act in its abstract nature requiring judgment and nice calculation, he is therefore not insane, but is in possession of fine powers of judgment and discrimination. There is, therefore, such a thing as automatism, which may mislead the convictions as to the actual present mental capacity of a person of questioned sanity.

There are many other courses of nervous action of a more strictly mental or moral nature which may become automatic, as well as a merely motor capacity. The mature mind, like a bird of prey seeking its food, often comes to intellectual conclusions with wonderful directness and speed, and that, too, from the most remote and unexpected quarters. It is said that when the quarry falls in some deep glen, amid tremendous cliffs and mountain peaks, instantly the eagles flock from remote and hidden places and gather there. This has been ascribed to a mysterious form of impenetrable instinct. The fact is that birds of prey are of grand vision, and they are always upon the watch. The moment that a victim sinks, the watchful sentinel nearest by starts into life, and with rapid wing rises into the air; this movement is at once seen by others farther away, and they too fly aloft and follow the course of the first. And thus, in a few moments, the intelligence goes far and wide—like that from the smoke and torch upon the hills of the Norsemen when an enemy appears.

So the human mind acts. What was once slow and anxious training, what was once pursued in regular steps and over difficulties, becomes by practice instinctive and

[1] "The brain must always remain the essential organ of the manifestations of the *ego* and the *me*—the moderator and the supreme arbiter of the acts of life."—*Loggia.*

automatic. The alphabetical order of reasoning no longer obtains. Small things are taken for granted. An immense number of positions are habitually assumed; and in ordinary life the mental processes, like eagle-flights, are grand movements from point to point, from headland to headland of thought, not lingering to go through the tedious routine of detailed mental activity.

And thus men not only sane, but men insane, live, and think, and reason, automatically, in common circumstances. It is when some morbid delusion or hallucination intrudes that very considerable exceptions are observed. When we reflect that in the ordinary life of the insane the delusion is not always uppermost in the mind, we must perceive that, in so far as every-day business is concerned, there will usually appear the automatic phenomena and conduct of men in general. When the delusion of insanity takes precedence, there must of necessity be an absence of even automatic regularity in mental activity. So long, however, as the delusion does not intrude, it may be impossible to determine from the conduct of even an insane person that he cannot discriminate between right and wrong; for automatism calls for no active or real process of discrimination. The mind is acting in the groove of habit.

All rational thought, even automatic, is primarily founded upon evidence and reason; and while it may therefore be modified and changed by reason or evidence, a *delusion* founded upon disease cannot be modified or changed except through changes in the disease itself. Of course, changes in a morbid process in the brain are beyond the competency of reason or evidence or will.

The truly alcoholic mind, therefore, is powerless to discriminate between the properties of right and wrong, because it finds itself to be the victim of unusual and untried circumstances, which it can neither define nor correct by the appliances of evidence and reason. It is needless to point out the fact that where evidence and reason cannot come *discrimination* is impossible.

Many truly insane criminals are adjudged sane and responsible because their automatic and common life resembles the similar life of rational minds; while the ignorant cheat and pretender is acquitted because he shams under all circumstances and upon all subjects.

Having considered alcohol as an agent destructive of the integrity of nerve-tissue, and having noted somewhat in detail the effects of such nerve-disintegration upon the mental and moral faculties, we are in a position to determine, with considerable distinctness, what would be the effects of a toxic agent which—by inhibition of nervous function, as by anæsthesia—would render such nerve-function inoperative or defective. For it must be admitted that the suspension of nerve-function from a toxic agency will present the same phenomena as where a similar suspension or destruction originates in any other cause—as, for instance, degeneration of nerve-cells and disruption of nerve-fibres.

Now it is well known that alcohol is an agent which produces anæsthesia in some degree in every instance where it is taken into the system. We have heretofore been discussing alcohol as it affects certain constitutions predisposed to its destructive action upon brain-tissue. Such trophic effects are not the rule. They are comparatively infrequent. But we now come to view a common or universal impression by alcohol upon the brain and nervous system of man; and we infer, from its disastrous effects upon the few who suffer from it in structure, its equally calamitous effects upon those who suffer from it in function.

We will not be specific upon the various properties of alcohol as a disorganizer of the sensibilities. But the fact may be stated that alcohol always depraves or destroys sensation. This may become apparent in the production of true anæsthesia or insensibility to ordinary sensation. Alcohol may also, by its toxic qualities, induce morbid, unnatural, and misleading sensations, and it may cause sensations to become localized in certain parts of the organism and absent in other parts.

The same confusion in the relations of sensation to perception which exists when the sensibilities are destroyed by deterioration of nerve-structure, exists also when the sensibilities are functionally impaired or destroyed. In either contingency there can be no accurate or reliable perceptions induced. Of course there can be no association of clear and normal ideation, and no certain knowledge or consciousness respecting the actual being and relations of *the self—the ego*. In addition, if the obtunding of the sensibilities continues for a long time through habitual drunkenness, the abnormal state of the sensitive powers becomes constitutional and hereditary, upon the principle of the *structuralization of function*, with its opposite when circumstances are favorable.

But it is time to stop—to turn our eyes from the still opening vistas of our subject. It is enough to add that the anæsthetic state partakes largely of the nature of the magnetic condition, wherein personality is divorced from normal consciousness and wherein man *non est animi compos*.

CASE OF SUCCESSFUL OPERATION FOR THE PERMANENT CURE OF RUPTURE.[1]

By ROBERT W. JOHNSON, M.D.,

BALTIMORE, MD.

THE frequency of hernia and the dangerous position of those who are so unfortunate as to own one have made investigation and experiment into the permanent cure of this deformity one of the most prolific themes in surgery.

Probably, if we leave out the excellent and popular truss which girds up the loins of so many of our fellow-citizens, in no department of the profession can we find more labor lost if measured by actual results.

The various means adopted in inguinal hernia, and the various engines, if I may use the term for some of the more cumbersome apparatus, have so far met the approbation of that partial jury alone, the inventor, but have been pronounced by the sterner court of the public: "Tried in the balance and found wanting."

The more prominent methods of invagination, as Gerdy's, Signorini's, Wutzer's, Wood's of London, Wood's of Cincinnati, Dowel's, Chisolm's; Dzondi's transplantation, as practised in a single instance by Jamison of Baltimore; local irritation with compression by Belmas, Pancoast, Velpeau, Armsby, and Riggs—all have either sunk into a merited oblivion or appear in treatises to be tilted at by the author. Heaton's method of injection seems popular now, and with some right, as numerous successes are reported and but few, if any, deaths.

The corkscrew arrangement of Mr. Spatton, of the North Staffordshire Infirmary, has also met with success in *his* hands. The majority of these operations apply only where there is an inguinal canal; when the hernia is an oblique one, and not when the two abdominal rings are dragged into immediate juxtaposition.

With the absence of this canal the difficulty of cure increases, for practically we have a door into the abdominal cavity at which the external ring is at best but a drowsy sentinel. Take away the canal and you rob the operator of his field of action.

Mrs. L. S. C——, aged forty-three, married twenty-two years, six of whose twelve children live, first noticed a small tumor in her right groin, thirteen years ago, one month after the birth, a difficult but normal labor, of her fifth child. This from time to time gave her pain, but was not reduced. After her next labor the tumor increased in size to a hen's egg, and was reduced by Dr. Blackman, of Virginia, who applied a truss for the first time, two

[1] Read before the Clinical Society of Baltimore, Md.

years after the appearance of the hernia. This gave her ease and retained the bowel until the summer of 1881, when the strap having broken she failed to have it fixed, and was rewarded for her negligence by the return of her old enemy with reinforcements. Her physician being unable to reduce it, sent for another physician of this city, who reduced it and applied a truss, which failed to retain it. Coming down again, and being apparently irreducible, her doctor called in a surgeon, who reduced it and applied a truss; but, as she expressed it, before he got into his carriage it was out again. I mention these different attempts by different men to show how impossible it was to keep it up with a truss. The case soon after fell into the hands of Dr. Girter, who attended the woman religiously for some time until her frequent demands wore out his patience, and knowing that I was particularly interested in herniæ, kindly asked me to see it with him, she having previously had Mr. Willms to see her twice with the hope of fitting a truss. Finding that I was willing to take the case, Dr. Girter handed it over to me in April, 1882, having called my attention to an apparent cyst, which he had frequently tapped with the intention of setting up adhesive inflammation.

I found on examination an entero-epiplocele about the size of a goose-egg, coming out through the conjoined orifice of the external and internal ring, passing to the labium majus. My finger entered through the ring the abdominal cavity, the walls of which were much relaxed from her numerous pregnancies. At the lower end of the tumor could be felt the cyst, and near it an almond-shaped body, which the patient insisted increased in size during her menstruation, a fact I myself could never verify and pressure of which would give the peculiar nauseous pain of pressing an ovary.

There was but little trouble in reducing the rupture and as long as the supine position was maintained it would not reappear, but whenever the calls of family or nature forced her to leave her bed, back would come the gut, and in spite of renewed trials of trusses, in which Mr. Willms' skill was again elicited, the pain of all of them forced her to remove the pressure, which, although she sometimes endured, did not retain the bowel.

Among other trusses I had one shaped like a horse-shoe, so that the permanent contents of the sac, which I considered irreducible, should not be pressed on, but the gut alone retained. All was in vain.

In the hope that time might accustom her either to the use of a truss or the presence of the rupture in the labium, I attended her from April to November, going sometimes as often as twice a day. Finally recognizing the fact that she could not be so hampered and prevented from earning a living or taking care of her children, and confessing that I was heartily sick of these monotonous visits, I suggested operating, pointing out the danger and stating the possible chances of recovery. After consulting with her husband and carefully considering the matter herself, she asked me to operate. There was no inguinal canal, so invagination was impossible. For the same reason Heaton's method of astringents was discarded. The only thing I saw to do was to reduce the gut, cut down, and tie the sac close to the external ring, and to give her every chance I determined on antiseptic precautions.

On November 28th, assisted by Drs. Gerter, Moah, Schaeffer, and Blumer of Utica, N. Y., I operated under ether. For a half hour previous the spray played in the room.

Having reduced the gut, with its characteristic farewell gurgle, I cut down on a grooved director until I reached the sac, which was, as I had expected, thickened from its long sojourn there. Convincing myself that there was no gut in the sack I ligated it near the external ring with cat-gut ligature, passed around with an artery needle. This was a fortunate procedure, for just at that moment the alcohol in the lamp caught, rendering it unfit for use during the rest of the operation.

Cutting out the piece below the ligature I did not open the peritoneal cavity. Having removed the lower part of the sac and checked hemorrhage by torsion I brought the edges of the wound together over a drainage-tube, including in the uppermost suture the stump of the sac and dressed with antiseptic gauze. Opium, gr. j, to put splints on the bowels, which acted spontaneously on the morning of the operation, and quin. sulph., gr. iij., were given. There was some vomiting from the ether, but that was not enough to strain my ligatures of the sac. Diet was principally light and fluid.

Except in the course of the drainage-tube the wound healed by first intention. At no time was there much discharge. Pain was confined to the wound, no tenderness on pressure except in the immediate zone of incision. Opium and quinine were given occasionally. Removed the sutures on the fourth day; drainage-tube a few days later.

At no time did her temperature, taken twice daily, reach 100° F. I did not allow her to get up for nearly a month after the operation, in order that the parts might get accustomed to their new relations without straining the soft inflammatory tissue near the wound. I have removed her corsets, and to prevent any compression of the parts have suggested shoulder-straps for her clothes as far as possible. I have kept a truss on her and will do so to make security doubly sure, though I think the external ring is now pretty well blocked up. I did not find any ovary in the sac, as her history and almond-like body led me to think possible. The ovular body was, I think, thickened omentum or inflammatory deposit of some standing. I am not casuist enough to think the end justifies the means, and I should have been as much ashamed to present my patient here on her legs as a specimen of her on a plate if I thought my operation unjustifiable. She knew its danger—that at best it might be successful and may be unsuccessful. On the other hand, she recognized that her condition in life would not permit her to be bedridden—that palliative means had had a fair trial. She chose the operation with its attendant danger, and asked me, rather than I her, to perform it.

The best test of my opinion of it is that I would do it again under the same circumstances. I consider it probably the most dangerous of the operations for permanent cure. I would prefer Heaton's or another where there is an inguinal canal. Of course the truss, when practicable, while only a palliative, is far superior to any chances of permanent cure by operation. What effect the spray had I cannot say, as it was not complete. Cleanliness I can vouch for as the best ally I had.

AN OBITUARY COMMENT.—It is rare that one observes the peculiar type of mind which permits itself to indulge in witticisms at the expense of the dead. A recent writer in *The Lancet*, however, who possesses this peculiarity, commenting upon the death of Dr. George M. Beard, says, epigrammatically, that he expended most of his attention upon matters which ordinary men did not think worth paying any attention to. Dr. Beard's studies, thus alluded to, covered such subjects as trance or hypnotism in its relations to evidence, and various problems in morbid and what may be termed "border-land" psychology. Dr. Oliver Wendell Holmes, who, some years ago, speculated upon these same things, anticipated the criticisms thus made by the kindly writer over the water. "There is," says Holmes, "just on the verge of the demonstrable facts of physics and physiology, a nebulous border-land which what is called 'common sense' perhaps does wisely not to enter, but which uncommon sense, or the firm apprehension of privileged intelligences, may cautiously explore, and in so doing find itself behind the scenes which make up for the gazing world the show which is called Nature." We do not know that anything could better offset *The Lancet's* ungenerous estimate of the kind of work which occupied, after all, only a fraction of the late Dr. Beard's attention.—*Medico-Legal Journal.*

PROBABLY A CASE OF TUMOR OF THE CEREBELLUM.

By EDWARD SWASEY, M.D.,
LIMERICK, ME.

ALTHOUGH I am unable to verify by post-mortem examination the diagnosis of tumor of the cerebellum in the following case, yet I think its history, symptoms, and the quite sudden death of the patient were so characteristic of a cerebellar lesion that the case is worthy of record.

Mr. B——, farmer, 36 years of age, married, and always in good, robust health until the past winter. His family history is good; a brother, however, died in early manhood of consumption. He denies any venereal taint.

During the past winter he has been conscious of failing health and strength, and thinks he is fifteen or twenty pounds lighter in weight than usual, but attributes this to unusually hard work during the fall months. No definite symptoms appeared, however, until about January 1st, when he began to have occasional attacks of vertigo, or, as he described it, "a rush of blood to the head." It was most noticeable when he would rise from a horizontal or sitting posture; it would last but a moment or two and then pass off. At times during an entire day he would be free from this trouble. This has been gradually increasing in frequency and becoming more pronounced in character, as not infrequently it was followed by some headache, mostly frontal and parietal.

This has not been very severe or troublesome. About four months ago, or two weeks after the foregoing symptoms commenced, stomach trouble began to appear in the form of atomic dyspepsia. There was partial loss of appetite, a coated tongue, foul breath, bowels at times constipated, but before they had always been very regular; generally some distress after eating, followed by eructation of gas, and very frequently the vertigo and severe headache would come on and remain until the stomach was emptied by vomiting. They would then immediately pass off and he would be comfortable.

He had been under the care of two other physicians a greater portion of these four months, who had treated him for dyspepsia, but he had received very little or no relief, and he says the symptoms have been slowly but surely increasing. He has slept well, and has been free from troublesome dreams. Four weeks ago, in addition to all these symptoms, he commenced to stagger in walking. He has had, during the present week, some occipital headache, but it has not been very persistent or severe.

Such was his past history up to May 4, 1883, when I first saw him professionally. His complexion had the appearance of good health, and he believed he would be "all right" if I could cause the stomach and bowels to perform their functions. The tongue was covered with a dirty white coat, except at the edges, which were clean and red; pulse 60, full and regular; examination of the lungs and heart negative. He was up and about the house. I gave him a powder of pepsin, bismuth, cinchonidæ, and ginger to take after meals; also a mild tonic of wine of iron, nux vomica, and Fowler's solution. I gave a powder of calomel and jalap to take as the state of the bowels should require. I considered it a case of derangement of the digestive track, and gave a favorable prognosis. On the 6th the appetite had improved as well as his digestion and strength; no vomiting, the bowels had moved slightly, but the head-symptoms were not in the least improved. To continue the treatment, and to assist the bowels to a free evacuation by the use of an injection. I directed that he take short rides and walks, and to be out of doors as much as possible.

On the 8th, the condition about the same, but the dizziness, staggering, and headache were certainly increasing; the latter symptom was still more frontal and parietal than occipital. On returning home from a near neighbor's on the day previous, so pronounced were these symptoms that he would have fallen but for a fence near at hand, and from here he was assisted to his home by a neighbor.

He had tried to ride, but the jolting and jar had affected his head unpleasantly and caused headache. Fearing that these symptoms had a more serious import than I had at first attributed to them, I subjected the patient to a more careful and searching examination.

The urine was normal in quantity, slightly acid reaction, specific gravity 1.020, free from albumen, but the phosphates were quite abundant; no microscopic examination. There had never been any œdema of ankles or under the eyes. The eyes were perfectly normal in appearance, no nystagmus, pupils normal and responded equally to light; vision for near and distant objects normal. There had been occasionally, at times of dizziness, dyspepsia, but it was transitory. There had never been any trouble in the hearing, and the tick of a watch was heard four feet distant, and equally on either side. The tongue was protruded in a straight line, still covered with the dirty white coat. The facial muscles acted normally. No sign of weakness in arm or hand muscles. He was requested to fully extend the arm and carry it well back, then, with closed eyes, to bring forward the hand and touch the tip of his nose with the tip of index finger. This was done accurately with the right hand, with the left there was deviation of half an inch.

There was no anæsthesia of face or extremities. The lower extremities were not tested for ataxic movements. The patellar reflex was normal. No pains in any part of the body, save the headache. In rising from a sitting posture he would have fallen backward, but the side of the room, three feet distant, saved him. He was assisted to gain his equilibrium, but when he stood with feet together there was a swaying motion of the body, but no tendency to retropulsion, or to fall in any definite direction. With the eyes closed these movements disappeared, and the body was stationary. He walked almost exactly like a drunken man. With eyes fixed on a distant object he would start forward, feet wide apart, and the body swaying and tottering about. He crossed and recrossed two rooms in this way without assistance. It brought on some headache, and he was glad to sit down. He felt quite comfortable after a short time, however.

I now came to the conclusion that this patient had a very interesting but a very fatal brain lesion, and that it was probably a tumor of the cerebellum. I gave him the iodide of potash in five-grain doses, and the bromide in ten-grain doses, with a liberal amount of water, three times a day; and ordered a blister to nucha. On the 10th, no special change, except that the iodide had deranged the stomach, as there was almost complete anorexia and a foul breath. The bowels were constipated, but would move by the use of powders and injections. The stools were "clay-colored." There was increased headache, and a disposition to remain in bed. To stop the iodide, but give the bromide and continue the stomach powders and the tonic.

On the 12th, while rising from bed to dress in the morning he fell, striking his face against the bed-frame, causing quite a wound on the cheek. There was no loss of consciousness, had never seen spasms or jerkings of muscles in any part. He sleeps well.

On the 14th, no special change in his condition; mind perfectly clear. He has more headache, but sleeps well.

He walks now only with the assistance of his wife. I had him walk alone, however, and the same gait described above was present. The expression of the eyes was that of a drunken man while he was walking, but not afterward. There was not the slightest odor of alcohol about him, and his mind was perfectly clear. I had him take a pin between the thumb and fingers of either hand, and then try to touch their heads together, with arms fully extended. In this there was hardly any deviation from a perfect coaptation.

Has had more occipital headache than formerly. I

noticed for the first time to-day some irregularity of the pulse, but there was no definite rhythm noticed. The bowels respond to medicines somewhat better, and the stools are normal in appearance.

I was asked by the patient's mother for my opinion of her son's condition, and I told her that I took a very gloomy view of his prospects; that I was quite positive that he had trouble of the brain, which would before long prove fatal, but I could not tell her how long before fatal symptoms would appear; possibly weeks might intervene, but I thought not, but when they did appear he would probably have still more severe headache, but I thought the mind would remain clear to the very last, and that he would die quite suddenly. I thought there was little to do in way of medication, except to treat symptoms. That afternoon I met my brother, Dr. William B. Swasey, in consultation, and he took a more hopeful view of the case, regarding it as derangement of the digestive organs, and that the vertigo and headache were dependent upon this. He advised the use of lime-water and milk, and to keep the bowels open by use of calomel. During the examination the patient was in bed, and was laughing and joking, and said that his head was perfectly free from pain just then.

On the 16th I saw the patient at 10 A.M., and found him with head and shoulders raised on pillows, the body and face bathed in perspiration, severe occipital headache, and this was increasing. He still could place the tip of finger on the nose quite accurately. The pulse was 58, and irregular; respiration 25, and regular; no sighing. These symptoms commenced about two hours before my arrival. He had slept well during the night. I noticed slight nystagmus for the first time, and the pupils were in constant motion, they were so sensitive to the light. The mind was clear and it remained so to the very last. The occipital headache was excruciating. The speech was unaffected, though he had some difficulty in swallowing, from a thick secretion of the throat apparently. I promised to see him again that day, but warned the family of the near approach of death, and thought he would not live through the day. I ordered the bromide to be given freely, but in stated doses every half hour for the headache, and a blister to nape of neck for the same purpose. An hour after my departure he rapidly became cyanotic and died, free from spasm or convulsions. The wife told me that the heart beat very rapidly just before death.

Unfortunately I could not obtain an examination of the brain, but as a substitute for this I will briefly review some of the recent literature of cerebellar lesions, and the reader must with me be content to draw his own conclusions repecting the lesion in this case.

My friend, Dr. L. Putzel, of New York, in reviewing the literature of this subject in the past five years, makes these statements:[1] "Nothnagel is of the opinion that lesions whose effects are restricted to one cerebellar hemisphere can not be diagnosed, but this view is contrary to that of various other authors, so that the question must still be regarded as sub judice.

"Disturbances of co-ordination (tottering gait) and vertigo are characteristic of cerebellar disease, but these symptoms may also occur in other affections of the central nervous system, and cannot, therefore, be regarded as pathognomonic. The diagnosis must depend upon the combination of positive and negative symptoms.

"Nothnagel believes that the tottering gait and vertigo are always due to an affection of the middle lobe of the cerebellum; he acknowledges, however, that in exceptional instances the middle lobe may be implicated, although these symptoms are not observed."

In a foot-note to Dr. E. C. Seguin's lectures on "Localization of Spinal and Cerebral Diseases,"[2] I find this additional statement concerning Nothnagel's conclusions:

"In the large majority of cases the upper extremities remain free from incoördination."

My friend, Dr. L. E. Holt, of New York, has recently recorded an interesting case of tumor of the cerebellum, which I will briefly review:[1]

A girl, four and one-half years of age, had been in declining health for six months previous to December 11, 1883, when she was first seen by Dr. H. She had been listless and indisposed to any exertion, subsequently had some fever every other day. She vomited frequently, had neuralgic pains in forehead and epigastrium, and occasionally pains in the extremities. There was complete anorexia, and the bowels became obstinately constipated. Occasionally pain and rigidity in back of neck. Three months before she was first seen by Dr. H. she began to stagger in walking, which symptom gradually increased until "she walked like one drunk," and was brought to the Dispensary in her mother's arms. More recently severe occipital headache had occurred. At time of examination, she had a heavily furred tongue and fetid breath. The body was balanced awkwardly, rocking to and fro. Reflexes normal, and there was no decided incoördination, no facial or ocular paralysis, pupils normal, no deviation of tongue, mind unaffected. "On December 16th there was a very marked degree of ataxia of both upper and lower extremities." She was as liable to fall in one direction as another; no jerking movements, and closing eyes made no difference in movements. She improved under the use of quinia (for there was a history of chronic malarial poisoning) for one week, then the former symptoms returned with increased severity, and she died suddenly on January 4th. The mind remained clear to the last, there was some thickening of the speech a day or two before death and some trouble in swallowing. Autopsy revealed "a tumor occupying the situation of the inferior vermiform process of the cerebellum, but it was three or four times larger in size than the process, and it had encroached upon the fourth ventricle."

Dr. Holt gives Nothnagel's conclusions, and in addition to those already quoted, I will give the following: The incoördination from lesion of vermiform process is sufficiently characteristic to be distinguished, in most if not all cases, from that of posterior spinal sclerosis. Its peculiarities are a swaying movement of the body in walking, the legs widely separated, the feet raised but slightly, a staggering, a rocking to and fro, and a final falling in any direction. Closing the eyes may or may not increase the difficulty. The spasmodic character of the movements is usually wanting. The group of symptoms so closely simulates those of alcoholic intoxication that one of Nothnagel's patients was several times locked up by the police for drunkenness.

Vertigo is often an early symptom, and may be the first noticed, but it is of no diagnostic importance unless associated with incoördination. The optic is more frequently involved than the other nerves of special sense. Vomiting is wanting in the stationary and degnerative lesions, but is a more common symptom in abscess, hemorrhage, and tumor. In many cases, especially of tumor, we have occipital neuralgia as a prominent symptom.

I might review other interesting cases that I find on record, but space forbids, and they would but tend to strengthen the conclusions to which Nothnagel has arrived.

RAILROAD SURGERY seems likely in time to develop into a specialty of itself. We are told (*Chicago Medical Weekly*) that organizations have been formed by the surgeons of at least three large companies: The Chicago, Rock Island & Pacific, the Pennsylvania Central, and the Wabash, St. Louis & Pacific. The surgeons of the latter company recently held a successful meeting at Fort Wayne.

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[1] Ziemssen's Supplement, edited by Dr. George L. Peabody, p. 550.
[2] MEDICAL RECORD, August 24, 1878, p. 143.

[1] MEDICAL RECORD, March 31, 1883, page 342.

A CASE OF DISLOCATION OF THE HIP-JOINT IN WHICH THE HEAD OF THE FEMUR LAY IN THE ISCHIO-RECTAL FOSSA.

By THEODORE R. VARICK, M.D.,

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CHARLES B——, a German, aged thirty-six, was admitted to St. Francis' Hospital, Jersey City, October 10, 1882, on account of a dislocation of the hip-joint, sustained forty-eight hours prior to admission. The accident occurred from jumping from the deck of an ice-barge, of which he was captain, to the wharf; a distance of eight feet. How he alighted it was impossible to ascertain, either from the patient himself or from his friends who brought him to the hospital. At the time of the accident the boat lay opposite the wharf at Barrytown, N. Y.

Ineffectual and persistent attempts had been made at reduction before his admission. On inspection the thigh was found to be flexed at an obtuse angle with the abdomen and abducted. A marked depression was observed over the seat of the great trochanter and the head of the bone lay in the ischio-rectal fossa, impinging strongly on the rectum.

In the presence of Drs. I. E. Culver, T. I. M'Loughlin, B. A. Watson, and W. W. Varick of the medical and surgical staff, and Dr. H. A. Long, assistant surgeon, the patient was fully anæsthetized, and reduction effected by firmly fixing the pelvis, and flexing the leg on the thigh, and the thigh on the abdomen; the limb was adducted and rotated toward the mesial line. The effect of these manipulations was to throw the head of the bone into the great ischiatic notch. From this position, by external rotation and abduction, the head of the bone was made to pass into the obturator foramen. The limb was next rotated inward, abducted, and gradually extended, which caused the head of the bone to slip into the acetabulum with an audible snap.

I have been unable to find any record of a case in which the head of the bone lay in this location. The nearest approach to it are the reports of four cases of dislocation into the perineum, as follows: Dr. Amblarce (quoted by Hamilton), in 1821, records a case in which the precise location of the head of the bone is not stated. Professor Pope, in the *St. Louis Medical and Surgical Journal*, July, 1850, mentions a case in which "the head of the bone was both seen and felt below the skin, and raising the raphe of the perineum." Willard Parker, in the *New York Journal of Medicine*, March, 1852, reports a case where the "head of the bone could be both seen and felt projecting beneath the skin of the raphe in the perineum." Dr. E. W. Hadder, in the *British American Journal*, March, 1861, also reports a case in which "the head of the bone was found under the arch of the pubes, the neck resting upon the ascending ramus."

MEDICINE AND POLITICS.—The Chicago medical institutions, judging from the complaints often made, suffer more from politics than those of most other cities. The County Hospital in particular is cursed by political management, says the *Weekly Review*, and indirectly figures in most of the local political campaigns. It is under the control of the Board of County Commissioners, and as a sample of its local importance the writer remembers when one of these commissioners had thirteen of his own or his wife's relatives engaged in some capacity about the buildings. Not within the memory of the oldest inhabitant has the warden of the institution been known to have been selected on account of any peculiar capacity or experience in such a place.

Something similar might be related of this city, where the city's charitable institutions are made to support a crowd of political heelers.

Progress of Medical Science.

A NEW METHOD FOR THE DETECTION OF SUGAR IN THE URINE.—At a recent meeting of the Clinical Society of London, Dr. Oliver gave a demonstration of the method he employs for the detection of sugar in the urine by means of test-papers. The test-papers were charged with the carmine of indigo and carbonate of soda. When one was dropped into an ordinary half-inch test-tube, and as much water poured in as just covered the upper end, and heat applied, a transparent and true blue solution, resembling Fehling's in appearance, was obtained. (A transparent solution could not, at the meeting, be produced from the London water. The characteristic reaction with grape-sugar was, however, unimpaired). If with the paper one drop of diabetic urine had been added, shortly after the first simmer, a beautiful series of color-changes appeared: first violet, then purple, then red, and finally straw-color; while, on the other hand, one drop of non-diabetic urine induced no alteration of color. The colors returned in the inverse order on shaking the tube, which allowed the air to mingle with the liquid. Reheating restored the colors again. Confirmation of the presence of glucose was obtained by dropping in a mercuric chloride paper, while the solution was still quite hot, after the complete development of the indigo reaction. Then there was produced immediately a blackish green precipitate. No such precipitation occurred when a drop of non-saccharine urine was under examination by the indigo test; then the blue solution was merely turned into a transparent green one. This test, as Dr. Oliver pointed out, discovers (*a*) the normal sugar; (*b*) the varying proportions of sugar which fill in the gap between the normal amount and that which characterizes diabetes mellitus, as in liver-derangements and vaso-motor disturbances; (*c*) diabetic proportions. It possesses the following advantages over Fehling's test: 1. It will detect sugar in any proportion in the presence of albumem, peptone, blood, pus, or bile, and as readily as in ordinary diabetic urine. 2. It gives no play of colors with uric acid. 3. It possesses portability, cleanliness, and stability. Moore's, Trommer's, and Boettger's bismuth tests are all inferior in delicacy.—*British Medical Journal*, May 19, 1883.

A NEW PROPERTY OF THE RED BLOOD-CORPUSCLES.—At a meeting of the Italian Medical Association (*Annali Univ. di Med.*) Dr. Fano related his experiments with peptone, and spoke of the rapid cessation of the reaction of peptone in the blood. He demonstrated the transformations of peptone absorbed by the digestive tract or transfused into the blood-current, and how peptone may be transformed and stored up by the morphological elements of the blood. The transformation consists in a process of dehydration, by which the peptones are changed into coagulable albuminoids. The active elements of this transformation are the red corpuscles which, assimilating the peptones that enter into the circulation, increase the specific weight. It is probably to the potash salts which the red corpuscles contain that this dehydration of the peptones is due, by which they are transformed into globulin. For this process to take place, the presence of oxyhæmaglobin is an indispensable condition. The stored-up albuminoids serve as a reserve supply of aliment, which is given up to the tissues as required.

THE BLOOD-VESSELS OF THE SPINAL CORD.—Dr. Adamkiewicz (*Centralbl. für die Med. Wiss.*) says that, when the vertebral arteries are injected, the bulk of the injection finds its way to the cerebellum, and only a small portion enters the vessels of the medulla oblongata and of the cervical cord. The vertebro-spinal arteries are distributed to the spinal cord. The branches of these divide and ramify as far as the roots of the fourth and fifth cervical nerves, then anastomose and form one sin-

gle stem. Their branches are the arteria sulci distributed to the fissures, and the arteriæ radicinæ, which spread laterally to the anterior roots. The so-called arteriæ vertebro-spinales posteriores spring from the vertebral between the dura mater and the cord itself, and take their course between the anterior and posterior roots as far as the fifth cervical nerve, anastomosing with other vessels and their own branches. The arteriæ penetrantes, so-called by the author, are the largest branches of these, and penetrate the posterior roots. The spinal cord itself is not supplied by branches of the arteriæ vertebro-spinales; it derives its blood from a considerable number of vessels—spinal arteries so called—branches of the intercostal, lumbar, and sacral, which enter the spinal canal beside the roots of the nerves. Adamkiewicz points out arteries (arteriæ magnæ spinales) running deeply with the anterior nerve-roots. Each root of the brachial plexus has pretty constantly its own arterial twigs. Great variation is observable in the arteriæ spinales anteriores; each artery gives off an anastomosing branch. The distribution of the arteriæ spinales posteriores corresponds very closely with that of the anterior. While the anterior form one continued chain of anastomoses in the anterior fissure, there are two such chains on the posterior surface (anastomoses laterales et posticæ). The veins on the surface of the spinal cord exceed the arteries in capacity. On the anterior aspect there are three principal venous trunks, of which the largest traverses the anterior fissure, the other two accompany the anterior roots. The blood passes from these to the median, lumbar, and sacral veins. The author notes more especially: 1, the abundant supply of blood-vessels possessed by the spinal cord; 2, the unusual number and extent of anastomoses which the spinal vessels establish. These conditions readily relieve local disturbances of the circulation by affording increased collateral circulation. The same circumstances explain why myelitis occurs most frequently where the anastomoses are most feebly developed, and where an injection penetrates least readily into the middle portion of the dorsal region of the cord.

The External Application of Salicylate of Soda in Acute Rheumatism.—Mr. Whiteley, in *The Lancet*, March, 1883, gives short notes on six cases of acute rheumatism, which benefited greatly from the external use of a lotion of salicylate of soda to the affected joints. The strength of the solution varied from 15 gr. to 20 gr. to the ounce. To those joints to which it was applied, relief followed very quickly, while those joints to which it was not applied were not relieved like the others.

Filarial Hæmato-chyluria.—Dr. S. Mackenzie records the case of a soldier, a native of Madras, but born of European parents, who, after arriving in England, found that his urine became increased in quantity, turbid, slimy, and by degrees quite milky. A little later he was seized with a sudden violent pain, extending from the left loin to the left testicle, and was admitted into the military hospital, and thence transferred to Dr. Mackenzie's care. The urine averaged one hundred and twenty ounces in daily quantity, its specific gravity was about 1.010, neutral or faintly alkaline, and contained always some albumen, but no sugar. The urea averaged .6 per cent. Ether readily removed the milky color. It deposited blood, triple phosphates, rarely oxalates, bacteria, and embryo filariæ sanguinis hominis. The blood, at night contained numerous filariæ, the maximum being reached at midnight, but they were absent during the day. By inverting the order of his life, so that he slept by day and was up at night, this condition of things altered too, and the maximum of filariæ in the blood was then at noon. After being under observation some time, patient got a chill, had a rigor, followed by signs of pneumonia at the left apex. This was followed by abscesses at the root of the neck and left shoulder-joint, which were opened. From the date of this illness the urine ceased to be milky, and the filariæ disappeared from the blood. The patient ultimately died, with empyema of right side of chest. The kidneys were slightly enlarged, and in early stage of suppurative nephritis. The mucous membrane of the bladder was thickened, covered with mucus, and contained extravasations. The abdominal lymphatics were carefully dissected, and found to be greatly dilated. The thoracic duct was dilated below and obliterated above. The lymphatics of the left kidney were especially dilated, and contained calculi. No trace of the parent worm could be discovered. No communication could be traced between the dilated lymphatics and the urinary passages.—*London Medical Record*, May 15, 1883.

Swallowing of Shot and Insufflation in the Treatment of Ileus.—In three cases with well-marked symptoms of invagination of the bowel (*Gazz. Med. Ital. Lomb.*, Feb. 10, 1883), Dr. Pedrini, after other remedies had failed to relieve, made the patient swallow five or six bullets and four pounds of No. 3 shot, at the same time using prolonged and repeated insufflation of air by the rectum. In each case the success of this treatment was complete, relief being quickly obtained, and the patient making a good recovery.

Tapeworm a Cause of Aphasia.—Dr. Armangué relates (*Journ. de Méd. et de Chir. Prat.*) the case of a woman of sixty who was seized with vertigo, and a few days later lost the memory of words for some days. After the expulsion of a tapeworm there was no return of her nervous troubles. He quotes a case of aphasia in a child cured by the expulsion of numerous tricocephali, published by Daniel Gibson; and a case of aphasia coinciding with tænia, published by Siedel. The editor adds a case of reflex hemiplegia and hemianæsthesia, with convulsive seizures, in a little girl of twelve, cured by expelling a tænia, observed by Langer in Germany.

Decoction of Lemons in Malarial Fevers.—Dr. Maglieri (*Gior. di Clinica e Terapia*, March, 1883) has obtained quite as good results with this simple remedy as with quinine. He finds it efficacious in acute and chronic malarial affections. Given four hours before the onset of a fever, it averts the paroxysm. This it did even in cases in which quinine had failed. In malarial cachexia the general health improved, and the liver and spleen were much reduced in size.

Chyliform Effusion into Serous Cavities.—A number of cases of this kind have been collected by Perice and Veil (*Journal de Méd. et de Chir. Prat.*). Veil relates a case of ascites, with milky effusion. The fluid contained a large amount of albumen, and, under the microscope, showed numerous fatty granules, and a small proportion of leucocytes. A post-mortem examination showed traces of peritonitis, and gummy deposits in the liver. In two other cases the milk-like fluid was not found at each puncture, the fluid being sometimes clear. Veil believes that the origin of the fat is from the transformation of pus, which dies and then becomes emulsified.

Is there a Catarrhal Ulcer?—In the *Berliner klinische. Wochenschrift*, February 19 and 26, 1883, Virchow combats the teaching of Niemeyer, that in acute and chronic catarrh, ulceration or superficial erosion of the mucous membrane of the larynx may occur, and that the inflamed mucous membrane is then in a condition analogous to the denuded cutaneous surface after the rupture or puncture of a blister from a blistering plaster. At the same time, Niemeyer describes follicular ulceration. Virchow holds that from the mucous membrane in catarrh there is simply an excessive flow of its normal secretion, as may be seen in the nasal membranes. This secretion, flowing from an unimpaired surface, is the essential feature of catarrh, so much so that the phrase "dry" catarrh is meaningless to the author, a contradic-

tion in terms. Catarrhal ulceration is equally unintelligible to Virchow. A child, he observes, may have an irritating discharge of mucus from the nostril, which may accumulate about the nostril and lip and cause inflammation and ulceration thereof; but the ulceration being on the skin, and not on the mucous surface, cannot be correctly termed catarrhal. The ulceration of the larynx in phthisis is not catarrhal. The pavement epithelium which extends from the lips to the cardia, with the exception of a small spot at the border of the larynx, is not the seat of ulceration. Parts of the mucous tract that are lined with cylinder epithelium are not thus exempt from ulceration, as may be often seen in the intestines after persistent diarrhœa, and in other parts where glandular follicles exist. Virchow recognizes only as catarrhal the secretion flowing from a simple mucous surface, and repudiates the application of this epithet to any secretion from glandular structures.

Experimental Meningeal Hemorrhage.—M. Bonnot has published some experiments (London *Lancet*, May 12, 1883), on the effects of injecting fluid blood beneath the dura mater in dogs, with a view of reproducing the symptoms of meningeal hemorrhage. Some of the animals were, others were not, under the influence of anæsthetics. The effects did not appear immediately, but a certain period, termed by Bannot the latent period, intervened between the moment of the injection of three to five cubic centimetres of fluid blood and the first signs of impaired function. The second period was the period of painful excitation. Soon afterward tonic convulsions were observed, characterized by convulsive phenomena and respiratory syncope. The respiration was at first accelerated, but soon suddenly ceased. General convulsions of all the muscles then occurred, and a violent attack of opisthotonos was brought on. The heart at first preserved its rhythm, but, if respiration did not recommence, either spontaneously or induced by artificial means, death supervened, evidently from asphyxia; but if the respiratory process is maintained, the animal may recover, after exhibiting for a longer or shorter period the symptoms of coma, the coma being longer in proportion to the amount of blood injected. Thus, with fifteen cubic centimetres of blood injected beneath the dura mater, anæsthesia was complete and the coma was protracted for a long time. During this comatose anæsthesia the respiration was usually irregular, intermittent, and analogous to that form which is known as the Cheyne-Stokes respiration. The period of tonic convulsions was always short; it supervened more readily if the animal was rendered anæsthetic by chloral, and especially if the subdural injections had been made rapidly, so as to produce an immediate change of pressure in the brain. In no case was M. Bonnot able to obtain evidence of paralysis.

Absorption by the Peritoneum.—Maffucci's experiments (*Giornale Internaz. delle Scienze Med.*) were undertaken with the object of determining whether, besides the diaphragm, there are other absorptive points of the abdominal cavity, or whether it is an absorbing surface in all its extension. From experiments on dogs he arrives at the following conclusions: 1. The diaphragm, great omentum, broad ligament, gastro-hepatic and gastro-splenic ligaments, the folds of Douglas, the meso-rectum, and exceptionally the mesentery, are absorptive of corpuscular fluids. 2. Where absorption of these fluids takes place, there is a modification of structure in the peritoneum, in the epithelial lining, as well as in the subjacent tissue; in the diaphragm there are lymphatic lacunæ, in the rest of the peritoneum lymphatic follicles, which, from these experiments, receive their physiological importance, hitherto conjectured only. 3. Corpuscular fluids are taken up by the lumbar and aortic glands, those of the hilum of the liver and spleen, and of the curvature of the stomach. 4. These fluids, absorbed by the diaphragm, are poured as much into the more complex glands of the mediastinum, as into the system of follicles. 5. Comparing the abdominal cavity, and also the mediastinum, with the general anatomy of the lymphatic system, in the dog, the first as well as the second may be justly considered as a lymphatic gland with the respective follicles.

Is there an Arachnoid Membrane?—Dr. Tukes is of opinion that a separate arachnoid membrane does not exist, and that the theory of a subarachnoid space should be given up. In place of this he would describe the brain membranes as twofold, the pia mater and dura mater, and two spaces, the subdural and intrapiamatral spaces.

The Simplest Method of Detecting Tubercle-Bacilli.—Finding the staining methods of Koch, Aufrecht, Ehrlich, Balmer and Fräntzel too complicated and slow, Dr. Zenkevitch recommends (*Mediz. Obozr.*, February, 1883) the following plan as simple, quick, and effective. A lump of sputa is crushed and rubbed between two cover-glasses; then the glasses are separated and allowed to dry in the air; after warming over the flame until the material becomes slightly brownish, the preparation is washed in water and put for one or two minutes in the staining-fluid, which is a saturated solution of fuchsin in anilin water (2 c.c. of anilin to 50 c.c. of water). Then the preparation is again washed in water, and placed for one or two minutes in alcohol containing nitric acid (one drop of acid to each 10 c.c. of alcohol). It remains now to once more wash it in water, dry in the air, warm over flame, and mount it in Canada balsam. The author states that this process of preparation makes the bacilli as clearly and brightly visible as Ehrlich's (or any other) method does. According to his description, a free bacillus, as a rule, has a length equal to one-fourth or one-half of the diameter of a red blood-corpuscle, the longest specimens being equal to three-fourths or even to the whole diameter. The longest rods contain from three to five intensely stained round granules (spores). Fuchsin stains also free spores, which are seen either isolated or grouped in colonies. The examination of the colonial spores allows all the stages of development of the microphyte to be traced from the form of granule to that of rod. Like Balmer, Fräntzel, and others, Dr. Zenkevitch found the bacillus only in phthisis. No rods were detected in the sputa of the patients with acute or chronic bronchitis, emphysema, or croupous pneumonia.

Medical Advertising in the Northwest.—Dr. A. W. Parsons, of Brainerd, Minn., writes: "In your issue of June 9th last I notice an editorial which reflects upon the professional probity of certain surgeons in the Northwest. I feel assured that the large majority of medical men in this portion of the country most heartily endorse your sentiments, but they will assuredly resent any inference that the practice of self-laudation is as common in this section as your notice would assume. It is a lamentable fact that certain practitioners, in all portions of the country, do not hesitate to divulge to the public, through the columns of their local papers, the results of their skill when such results redound to their credit. But I am sure that a careful acquaintance with the medical men of the Northwest would show you that the practice of quackery and self-praise does not exist among them to any greater degree than in other and older localities. Indeed, I feel called upon to state that the majority of physicians whom I have met during a two years' residence in the vicinity of St. Paul and Minneapolis, have impressed me with the belief that the rapid growth and wonderful development of this new country have been no more than commensurate with the advance in medical and surgical science, and the prevalence of professional intelligence, courtesy, and integrity."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, July 14, 1883.

ACONITIA: ITS USES IN NEURALGIA.

ATTENTION has been again called to this valuable alkaloid by the interesting articles of Dr. Laborde in late numbers of the *Journal de Therapeutique.*

Aconitia (which exists in the root of the aconitum napellas in the proportion of about one drachm to twenty-six pounds) has been especially made the subject of study by the late Prof. Gubler, whose monographs on this medicament are of great practical utility. Gubler was one of the first to insist on the importance of this remedy in the treatment of trigeminal neuralgia.

Aconitia is found in commerce under two distinct forms; the amorphous and the crystallized. The latter, which is somewhat stronger and more reliable, is the best known, and is generally prescribed under the name of Duquesnil's aconitia.

Not to dwell on the toxic effects of this powerful alkaloid, which is only safe in very minute doses, we may sum up its therapeutical actions by the observation that it seems to have a special selective influence on the extremities of nerves of sensation, which it paralyzes. This elective affinity is especially manifest in the case of the fifth pair of nerves.

The beneficial effects of this medicament in neuralgia, in general and facial neuralgias in particular, have been attested by a multitude of observers, among whom we may mention Oulmont, Seguin, Franceschini, Merck, and Laborde. Gubler is fond of narrating an incident which occurred in his practice. It concerned a patient on whom Nélaton had practised resection "of all the branches of the tri-facial" (!). The pains continued to be just as atrocious and just as persistent as ever. The patient, reduced to despair, and ready to commit suicide, was treated by Gubler with aconitia. Seven milligrammes a day of Hottot's aconitia was administered in granules with the most marked relief, and by perseverance in this remedy a complete cure was effected.

Laborde, in the *Journal de Therapeutique* above referred to, publishes reports of six cases of neuralgia, mostly of the fifth pair, in all of which marked benefit was obtained from aconitia; in some the benefit was permanent. In all these cases the medicine was given by mouth. He makes use of the granules of Duquesnil containing one-fourth of a milligramme. One granule is a sufficient commencing dose, and he advises that the dose should not be repeated under four hours. Generally the second granule will give relief, if the first fails to benefit.

A safe and efficient way, which we have often tried, is the following, which is in accordance with the directions laid down by Dujardin-Beaumetz: Duquesnil's aconitia is ordered—the one-fourth of a milligramme granules. Of these the patient is ordered to take one granule every three hours, till eight have been taken during the twenty-four hours. It is seldom that there is occasion to go any farther. Generally the second or third causes complete disappearance of the pain. Given in this way, we do not exceed two milligrammes a day. If this does not relieve it is vain to push the remedy farther. Sometimes after the second or third granule a little tingling of the tongue, and pricking of the skin of the face, with constriction of the mouth are experienced. Patients sometimes complain that their head feels "hoop bound" for a time.

There is no doubt about the superlative excellence of this medicament in all so-called congestive neuralgias, as we have notes of obstinate cases of sciatica which have proved amenable to treatment by aconitia. It is one of the remedies that should be first tried in severe sciatica and lumbago, *a frigore.*

Even in the case of symptomatic facial neuralgias, as well as protopathic, the pain is often alleviated by aconitia, as Laborde has shown.

GREEK OR GERMAN—WHICH?

A COLLEGE graduate, prominent in the profession, said to us recently: "If I could exchange my knowledge of Greek for German, it would be worth everything to me now. It is mortifying to be dependent on others for information as to what is going on in the great medical centres of the old world."

Our friend spoke the sentiments of multitudes who, in their collegiate days, spent in acquiring a knowledge of Greek the time which would have made them proficient in any one of the modern languages. Amid the cares of a busy life they have no leisure now for the German grammar and lexicon.

Charles Francis Adams, Jr., in the annual oration before the Phi Beta Kappa Society at Harvard recently, had the courage to advocate a radical change in the course of studies pursued at that University. It is seldom at college commencements that so much wholesome truth is told. He asserted that the traditional college course does not fit the graduate for the duties of life, but diverts him from them. He appealed, in confirmation of his charge, to the experience of his great-grandfather, his grandfather and his father, also to his own experience, and that of his brothers. John Adams, the second President of the United States, had learned what Greek was taught at Harvard, and at the age of forty-two was appointed ambassador to France. They did not talk Greek in France, and he found himself in an awkward predicament from ignorance of the language. The same was afterward true of John Quincy Adams, and of Charles Francis Adams, and had been true of the orator. He maintained that the study of Greek had been a hindrance and a waste of time to every liberally educated member of the family, and that this experience has been by no means exceptional. The same time devoted to the study of the modern languages would be of more advantage, though the speaker did not object to Latin,

since Latin is the parent of most of the European languages.

As for the vaunted discipline obtained from the study of Greek, it is no more than can be acquired from the study of German; he thought that Plato and the venerated names of Greek literature were greatly overestimated by tradition, and that the study of the Greek grammar was a total waste of time, and that as an intellectual exercise it would be just as beneficial to the student to memorize Kant's "Critic of Pure Reason." In short, Mr. Adams considered the Greek worship as fetich, and would reorganize college education by leaving out Greek and substituting German and French. All certainly that is valuable in those old writers, Plato and Aristotle, etc. (and there is very much that is rubbish), could be obtained through the medium of a translation.

For young men intending to enter the medical profession, it is a pity to waste a year of study and spoil a good pair of eyes over Greek declensions and dialectic variations, and in trying to get the hidden meaning of authors who give no more practical thought than can be obtained from the masterpieces of English literature, while the Continental languages still remain unknown, and the whole broad field of physical science remains unexplored. The radical change which Mr. Adams so eloquently urges must soon come.

BOOKS OR BACKGAMMON.

DESPITE the fact that Wood's Medical Library Series circulates largely in the West, it is said that the benighted physician still lives, in some parts of that vast indefinable region, who speaks of Astley Cooper as the "greatest living surgeon"—whether he votes regularly for Andrew Jackson is not known. Several years ago we met with a practitioner out "West," doing a comfortable business (so he said), whose library consisted of only two books, Hartshorne's "Essentials," and Druitt's "Vade Mecum." He had chosen wisely and well, but his enthusiasm for knowledge was somewhat too moderate. Unfortunately he had a strong predilection for certain games of chance, which, if they demand much time of their votaries, confer little discipline.

We think there are few in the profession who so little feel the responsibilities of the vocation which they have chosen as did our Western confrère, who notwithstanding the fact that he was liberally supplied with self-confidence, must not seldom have found himself insufficiently prepared for the serious duties before him; this we say without any disrespect for the eminent authorities whom he was in the habit of consulting. His case is, perhaps, not widely dissimilar to that of many who buy books and take journals which they never read. Better the "Essentials of Medicine," well studied, than all of Ziemssen, kept simply to ornament the shelves.

The great body of medical men throughout the country are, we feel assured, men who, feeling the gravity of the tasks which they daily undertake, seek all the light they can get. They are diligent students of all the great masters in medicine and surgery. They have no time for whist or for lounging. The more work they have to do the more time they must find to read and meditate. Preparation for their daily duties must be made, if the midnight lamp must be burned. They must diligently con their medical journals, for they need the experience of others to guide them. Moreover, they must record their own experience, much of which is too valuable to lose. Thus, and thus only can they discharge their obligations to their constituency and to society, by assimilating the best thoughts of the age, and by helping on the car of progress.

MEDICAL EDUCATION THE FUNDAMENTAL FACT IN MEDICAL ETHICS.

AT the last meeting of the American Medical Association, Dr. A. L. Gihon, U.S.N., read a paper upon the above title, at the close of which he submitted the resolutions given below. They were promptly rejected by the Association. It seems incredible that temperate and sensible men should fail to acknowledge that Dr. Gihon's views are in the main correct; and that what our profession most needs, and should most work for, is better educational requirements. The resolutions presented are somewhat radical, and their author would doubtless have made more impression if he had suggested, at the beginning, less sweeping reforms.

It may be questioned, also, whether the American Medical Association can carry out any serious medico-political measures, so long as it is an unchartered body with a shifting membership and without legal status.

We print the resolutions, which are at least very suggestive, in full:

Resolved, That the Section in State Medicine urges upon the Association the necessity for at once taking steps to exclude unqualified members from the profession, by refusing fellowship to illiterate, ignorant, and incompetent graduates.

Resolved, That the Association be recommended to authorize the Section in State Medicine to act as a Standing Committee on Medical Education, the several elected members being required to communicate without delay (1) with the several State medical societies and the Legislatures of the States they respectively represent, with the object of creating *State Boards of Medical Examiners*, where such are not already in existence, whose certificate shall be necessary to the issue of a license to practise medicine in that State; and (2) with the authorities of every regularly organized medical college in the State, which has not already taken such action, urging upon them, *First*, the requirement of a *proper preliminary education of matriculants*, to embrace at least a knowledge of English orthography and grammar, the etymology of the more common Greek and Latin derivations and the fundamental rules of arithmetic, to be ascertained by a written examination, preserved for reference; and, *Second, greater care in ascertaining the fitness of candidates for a degree*, by making their final examination in part a written one, to be kept on record and accessible for inspection by State Boards of Medical Examiners, Boards of Censors of Medical Societies, or other authorized persons requiring information as to the professional qualifications of graduates.

Resolved, That in the opinion of the American Medical Association, medical colleges should confer upon graduates the degree of *Bachelor in Medicine*, such graduates to be eligible to the degree of *Doctor in Medicine* at the end of three years, after having given satisfactory evidence of their qualification to the Board of Censors of the State Medical Society.

Resolved, That Article II. of the plan of organization of the American Medical Association be amended by this additional proviso:

Provided, That every permanently organized State, County, or District Medical Society entitled to representation in this Association shall be required to appoint a Board of Censors, who shall rigidly scrutinize the literary and professional qualifications of every candidate for membership therein, and hereafter no delegate shall be admitted to a seat in this Association who shall not have received the certificate of such a Board of Censors or of a State or National Board of Medical Examiners.

THE NEW TARIFF ON DRUGS AND CHEMICALS.

ON July 1st the new tariff regulations went into effect. Nearly forty per cent. of the entire number of listed articles comes under the head of drugs and chemicals. Hence the present change will have some effect upon those who make and dispense medicines. Heretofore a duty of 20 per cent. has been charged upon chemicals, and a duty of 40 per cent. upon medicinal preparations. Under the new tariff they are all placed at 20 per cent.

The general effect of this change will be favorable to manufacturers of drugs and chemicals on account of the reduction of the tax upon the articles used in manufacture.

The retention of quinine upon the free list has, says Mr. D. C. Robbins somewhat dolefully, destroyed its manufacture in this country. The United States, he says, consumes 1,600,000 ounces annually, of which one-half is imported, when it should all be made here. Not being manufacturers, but consumers, we can hardly see the force of this logic.

Among the more common articles on which the duty has been lessened, we present the following list.

Article.	Unit.	Rate.	
		Old.	New.
Glycerine, crude....	Value and lb.	30 per cent.	2 cents.
Phosphorus.....	Value and lb.	20 per cent.	10 cents.
Castor oil.....	Gallon.	$1.00.	80 cents.
Croton oil	Pound.	$1.00.	50 cents.
Oil, flaxseed, linseed, cotton seed.	Gallon.	30 cents.	25 cents.
Mineral waters, artificial, imitation.....	Value and qt.	3 cents plus 25 p. c.	30 per cent.
Boracic acid, pure..	Pound.	Free.	5 cents.
Potash, chromate and bichromate	Pound.	4 cents.	3 cents.
Copperas.....	Pound.	6/10 per cent.	3/10 p. c.
Magnesia, medicinal carbonate.....	Pound.	6 per cent.	5 cents.
Soda, caustic.....	Pound.	1½ per cent.	1 cent.
Zinc, oxide of dry...	Pound.	1¾ cents.	1¼ cents.
Oils, essential, expressed, n. o. p....	Gallon.	20 per cent. to $1.00.	25 per cent.
Officinal medical preparations.....	Value.	40 per cent.	25 per cent.
Barks, beans, etc., ground or refined.	Value.	20 per cent.	10 per cent.
Chloroform.....	Pound.	$1.00.	50 cents.
Opium, preparations of, n. o. p.....	Pound.	$8.00.	$10.00.

The increased duty on opium refers only to its preparations.

Besides the above, a considerable number of articles have been placed upon the free list.

The results of the new tariff as regards consumers ought to be a slight reduction in the price of many drugs. It will, however, be some time before the public finds any noticeable difference.

News of the Week.

THE BOYLSTON PRIZE, of $200, for the best essay on "Measles, German Measles, and Allied Diseases," has been awarded to Dr. P. M. Braidwood, of Birkenhead, England.

MEDICAL EDUCATION VS. MEDICAL ETHICS.—The Bellevue Hospital Medical College announces itself as adhering to the old Code, but requires no preliminary examination of its matriculants.

DR. J. H. THOMPSON, of Rome, Italy, is on a short visit to this city.

DR. SPINA, Koch's opponent, has been nominated Professor of General and Experimental Pathology at Prague. This may be considered an endorsement of the value of Spina's work.

PORRO'S OPERATION was performed by Dr. Parrish in Philadelphia recently, upon a dwarf. The patient survived for several days, but finally died.

YELLOW FEVER TRANSMITTED BY DESPATCHES.—It is stated that one of the officials of the Foreign Department at Paris has caught the yellow fever through a despatch sent from Brazil. One of the daily papers wonders if it was a telegraphic despatch.

EXPERIMENTAL INOCULATION WITH SYPHILIS.—It is stated that Dr. Cory, the Director of Animal Vaccination at the Vaccine Establishment, London, England, has inoculated himself with syphilis while making experiments on himself as to whether syphilis can be communicated from one body to another through vaccination. One would have thought that the possibility of transmitting syphilis by means of vaccination was sufficiently well established without any further experiments, and certainly one would have supposed Dr. Cory could have had no doubt of the fact. At all events, if reports as to his sufferings from the inoculated disease are true, he must be thoroughly well convinced of the fact that at least one of the means of getting syphilis into the system is by means of vaccination. It has been officially stated, however, that "the result of transmitting the infection of syphilis was not attained without departing in essential respects from the Board's instructions to public vaccinators and from the recognized practice of all vaccinators."

THE SUMMER SANITARY INSPECTORS have been appointed by the City Board of Health. The total number appointed was fifty, and work was begun on July 9th. We observe a large number of new names upon the list. New brooms sweep clean, and there are some reasons for thinking that some change will not be disadvantageous.

YELLOW FEVER.—Infected vessels have appeared at Galveston, Pensacola, Ship Island, and at date one is on the way to this port from Havana. No cases have yet occurred, however, except on the vessels. A despatch says: There are two vessels at Ship Island in charge of the Surgeon of the Marine Hospital Service, who established himself in the quarters of the late National Board of Health yesterday, and one vessel at Galveston and two at Pensacola are under orders to proceed

thither. There has been undisguised bitterness of feeling between the retiring officers of the National Board and the incoming agents of the Marine Hospital Service, and the latter, when they took charge, found the quarantine station at Ship Island gutted of all conveniences and properties. Even the steam despatch boat, Day Dream, had been sent away, but she has since been discovered tied up to the levee at New Orleans and taken possession of by the Treasury Department. The officers of the National Board have had her up for sale for the past few weeks, but they were unable to obtain a purchaser. Upon the withdrawal of the inspection service of the National Board the Sanitary Council of the Mississippi Valley assumed charge of the same, it being decided at several up-river points that certificates of the Marine Hospital Service would not be recognized.

Dr. Holmes will deliver the address at the opening of the new building of the Harvard Medical School, October 15th.

A Monument to Fabricius is to be erected by the citizens of Acquapendente, Italy.

The Third International Congress of Anti-Vaccinationists will meet in Berlin this summer. New York sends three delegates.

The Ninth Annual Meeting of the Tri-State Medical Society will be held at Indianapolis, September 18th, 19th, and 20th. Especial efforts to make this meeting a success are being made by its energetic officers.

The Late Dr. Beverly Livingston.—At a meeting of the Medical Staff of the Northern Dispensary, held July 6, 1883, the following resolutions were adopted:

Whereas, We learn with profound sorrow of the death, at the outset of a promising professional career, of our late associate, Beverly Livingston, M.D.; therefore be it

Resolved, That in the death of Dr. Livingston the medical profession loses a worthy member, the Northern Dispensary an efficient aid, and the members of the staff an associate whose genial qualities and untiring zeal will long be remembered.

Resolved, That our most sincere sympathy be extended to the family of our late associate.

Resolved, That a copy of these resolutions be published in The Medical Record and transmitted to the family.

A. F. Pray, M.D.,
C. D. Hayward, D.D.S.,
R. W. Glassford, M.D.,
Committee.

The Progress of the Cholera Epidemic.—The number of deaths from cholera have, up to time of writing, been as follows:

	At Damietta.	At neighboring towns.
July 3d	124	43
July 4th	111	63
July 5th	116	63
July 6th	101	52
July 7th	98	60
July 8th	96	61
July 9th	87	9

The number of persons killed by the disease at Damietta (July 11th) now amounts to about twelve hundred, or over one-twenty-fifth of the population. It has been very malignant, but has so far been confined almost entirely to the natives. The disease is travelling up the Nile, having already reached Shirbin, a small village thirty miles above Damietta, Mansurah, a town twenty miles beyond, Menzalen, and Samanoud, the last a small village only seventy miles below Cairo. It may possibly have reached Cairo by the time this appears. Some cases have been reported at Alexandria. The disease was due in Egypt in 1877, having appeared regularly every twelve years since 1781, spreading always to the west and taking about two years to exhaust itself. In all previous instances the epidemic has developed energy among the oriental races, whence it has spread to Europe. The exodus which has taken place from Egypt is likely to carry the infection to the adjacent towns of Syria, and particularly to Beyrout, whence it may spread to any point on the Mediterranean. A number of vessels from Bombay, carrying pilgrims to Mecca, are expected at Geddah, and it is likely that the epidemic will be brought by them. All the European Governments have established strict quarantine regulations as to vessels coming from Egypt except England. The Sanitary Council of Constantinople, in order to prevent the introduction of cholera, have resolved to ask the Porte to request the Egyptian Government to prohibit refugees from starting for the Turkish coasts, and to inform that Government that if any refugees do arrive at ports belonging to Turkey they will not be allowed to land. Sanitary cordons have been drawn around some of the infected towns.

Reviews and Notices.

Medical Essays, 1842–1882. By Oliver Wendell Holmes. Boston: Houghton, Mifflin & Co. 1883.

This volume embraces nine essays, most of which are more or less familiar to our readers. They vary somewhat in merit and interest.

The essays on "Homœopathy and its Kindred Delusions" will always remain the most brilliant and masterly criticism that has ever been made of the development of medical isms. As a contribution to the subject of the value of human testimony also, no one can read it without being instructed. We mistake—there is the world of the pig-headed, of the unteachable Philistine—and besides (we crave pardon) there are the ladies—to these two classes Dr. Holmes's essay is unintelligible; hence our 'pathies and our patent medicines.

The essay on "The Contagiousness of Puerperal Fever" is of another character, and illustrates the capacity of the author for dealing with scientific questions. The issue for which Dr. Holmes contended with so much earnestness and effect is now a dead one, but dead because all agree with what Holmes laid down in 1843.

The essay entitled "Medical Currents and Counter-currents" is a pungent criticism upon the practice of overdosing, and a philosophical analysis of why we give and when men take medicines. But, although this chapter contains much that is witty and instructive, the subject of therapeutics now-a-days is looked upon from a somewhat different standpoint than it was twenty-five years ago, since which time the physiological school has developed.

Of the remaining essays those on "Bedside Instruction" and "The Young Practitioner" are perhaps the best. They especially illustrate the relations of our author toward medicine.

There is no transcendentalism about Holmes. He

preaches common sense, humanity, and small doses. He pleads for a knowledge of human nature as well as of the human body, for sound observation as well as for study. He has a little feeling of antagonism toward the present tendency to cultivate the medical sciences; a feeling which Trousseau showed when he said: "Good heavens, gentlemen, a little less science, a little more art!" Dr. Holmes is the essayist *par excellence* of the practitioner. We fear that, as regards pure science, he is a bit of a Philistine himself, and it is somewhat interesting to find that our author, who has attacked non-conductive dulness all his life, now shows a trace of it himself in his relations to medical progress. For it is certain that the advancement of medical art is not in the hands of our great and successful practitioners, but with the patient workers who are trying to follow nature into her last hiding places.

BRAIN-REST. By J. LEONARD CORNING, M.D. New York: G. P. Putnam's Sons. 1883.

DR. CORNING has given us a little work which is of considerable interest. It is written with evident care and in a scientific spirit. The author preaches the value of securing brain-rest by regular sleep at proper hours. He describes his own device for carotid compression, and mechanically regulating the cerebral circulation, with all of which our readers are familiar. Dr. Corning's discussion of pathology of "brain-exhaustion," with its cerebral hyperæmias and anæmias, appears to us to be a trifle amateurish. We might say the same regarding some of the therapeutical parts. On the whole, however, the book is a very creditable and suggestive contribution to the important subject with which it deals.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF MISSOURI, at its Twenty-fifth Annual Session, held at Hannibal, Mo., May 16, 17, and 18, 1882.

THIS year's report gives a marked increase in membership since the last meeting. The president's address is devoted mainly to the exposure of quackery and the several classes of "quacks," with which the State is apparently pregnant. Very little in this direction can be accomplished by such means. We would advise an application to the State legislature through a properly appointed committee, as the true means of working out the reform needed. Considerable good work is, however, shown to have been performed during the year, much of which is indeed commendable.

TRANSACTIONS OF THE MEDICAL ASSOCIATION OF GEORGIA. Thirty-third Annual Session, held at Atlanta, Ga., April 19, 20, and 21, 1882.

MUCH praise is due to the secretary of the Society, A. Sibley Campbell, M.D., for his untiring efforts in securing the handsome appearance of the volume before us. We have no doubt, from the many very valuable articles of general interest to the practitioner contained in the text, that a sufficiently large number of copies will be disposed of to leave a balance in the treasury. The finances of the society are, we regret to say, in a poor condition, due, however, to the carelessness or unwillingness of members to support its interests by paying their just dues. This cannot be too severely censured. The book is handsomely printed on fine toned paper and elegantly bound in cloth for permanent use.

SIXTY-NINTH ANNUAL REPORT OF THE TRUSTEES OF THE MASSACHUSETTS GENERAL HOSPITAL AND MCLEAN ASYLUM. Boston, 1882.

FROM a comparison with the previous year's work, the report shows a slight increase in the number of patients treated at the Hospital, together with the receipt of several munificent donations, which, from the treasurer's report of the finances, owing to numerous improvements in the way of building, etc., during the year, were not among the least to be desired. At the Insane Asylum a similar increase in patients is noticed, but also a relatively larger percentage of recoveries than for several years previous. Altogether, both institutions are in fair and prosperous circumstances. Superintendent Cowles is to be commended for the earnestness manifested in his work.

TRANSACTIONS OF THE OHIO STATE MEDICAL SOCIETY. Thirty-sixth Annual Meeting, held at Columbus, June 14, 15, and 16, 1881.

THIS volume opens with the report of the Transactions of the society, the address of welcome being delivered by Mayor Peters. Following this and comprising the body of the work, are the reports from the several departments of medicine, together with a number of excellent papers on subjects of general importance to the profession, many of which will be read with profit.

FOURTEENTH ANNUAL REPORT OF THE PRESBYTERIAN HOSPITAL IN THE CITY OF NEW YORK, FOR THE YEAR 1882.

THE present report covers a period of nineteen months. The total number of patients received during this time is 1,918; during the past year, 1,202, or nearly double the number treated for the year ending April, 1881. An extraordinary large number of accident cases is also noticed, and owing to the great increase in these directions, the duties of the medical staff have been unusually severe. The superintendent's report is in the highest degree creditable. The finances of the institution are seen to be at an ebb and need replenishing; this should meet with prompt action from the proper quarters.

THE NEW YORK INSTITUTION FOR THE IMPROVED INSTRUCTION OF DEAF MUTES. By D. GREENBERGER, Principal. Reprinted from the *Archives of Otology*, Vol. XII., No. 1, March, 1883.

THIS pamphlet gives an exhibit of the workings, etc., of the institution, for the benefit of those devoted to this specialty.

ANNUAL REPORT OF THE MANAGERS OF THE WESTERN PENNSYLVANIA HOSPITAL FOR THE INSANE. Dixmont, 1882.

FROM this report we find that there were treated during the past year 768 patients, male and female; showing an increase of 173 over the previous year. There were discharged 267, and 46 died, giving a decrease in the corresponding rate of mortality.

SIXTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY, 1882.

THIS extensive and carefully prepared volume leads one to presume that the duties of the board have been unusually onerous during the past year. The mortality, we notice, shows a considerable increase (5,130) over the previous year, due, in a great measure, it is believed, to the exceptionally severe summer and winter. The report, moreover, goes very extensively into the sanitary condition of the State, the sewage, malaria, etc., an excellent exhibit of the duties to be performed, and which, it is hoped, will not be overlooked.

ELEVENTH ANNUAL REPORT OF THE NEW YORK INFANT ASYLUM. January, 1883.

JUDGING from the annual report, the duties of the past year have been remarkably arduous. The management has, however, been admirable, and the exhibit of the Medical Board is in every respect very gratifying. A steady increase in the number of patients is noticed, and the usual assistance and shelter has been rendered to friendless women. The professional labors of Dr. Kate Parker, resident physician at Sixty-first Street, are worthy of the highest commendation. Undoubtedly, however, the greater part of the work of this institution is unwritten and unappreciated by the community at large. Nevertheless, as an object of Christian charity, no one of our hospitals or asylums is more eminently deserving of the widow's mite.

FIFTH ANNUAL REPORT OF THE CONNECTICUT STATE BOARD OF HEALTH, FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1882.

FROM the elaborate volume at hand, an amount of labor and zeal in sanitary affairs is shown that is truly commendable. It is evidently the intention of the board to devote untiring energy in this direction toward improving the sanitary condition of several localities. Some original work may be expected during the current year.

ANNUAL REPORT OF THE DIRECTORS AND MEDICAL BOARD OF ST. MICHAEL'S HOSPITAL. Newark, N. J. January 1, 1883.

BESIDES the large number of cases treated, an important feature of the past year's work is the re-establishment of the eye and ear clinic, and we are glad to say, with satisfactory results.

LECTURES ON MEDICAL NURSING. By J. WALLACE ANDERSON, M.D. Lecturer on Medicine, Royal Infirmary Medical School, and Physician to the Royal Infirmary Dispensary, Glasgow. Second Edition, pp. 224. New York: Macmillan & Co. 1883.

THE fact that this little work is already in its second edition would seem to be sufficient evidence of its practical usefulness. Besides the immediate care of the sick and attention to the several details of nursing, not only in a general manner, but also in special conditions and diseases, all of which, moreover, is exceedingly well presented, the employment of numerous therapeutic measures, cold in various forms, blisters, injections, leeches, etc.; the examination of the pulse, the urine, the temperature; administration of stimulants, narcotics, etc., and their indications, all receive the most careful consideration. A series of questions also supplement each lecture. In short, every minute detail of the clinical history of medical nursing, and its practical application, is presented in an exceedingly interesting manner; and to those who purpose making this subject a study, the work will prove not only instructive but a highly valued friend. Indeed, we doubt not that many general practitioners will find this book both interesting and suggestive.

THE "VANDYKE BROWN" POEMS. By MARC COOK. Edited by his wife. Pp. xviii., 225. Boston: Lee & Shepard. New York: Charles T. Dillingham. 1883.

FOR the thoughtful physician who has come to regard his lifework in its broadest sense, as peculiarly a study of humanity, this unpretentious volume will possess a pathetic and more than passing interest. Apart from the portrait of the author which faces the title-page, and which presents that vivacity of intellect and sanguine temperament which so often are painfully combined and intensified by prolonged pulmonary disease, it does not require a great amount of professional acumen to read between the lines of the poems which follow, as plainly and surely as from a temperature-chart, the varied phases of the one-sided struggle for life.

The profession is already well acquainted with the history of the case of Mr. Cook, as embodied in his little treatise on "The Wilderness Cure" (William Wood & Co., New York. 1883), and his well-known article on "Camp Lou," published in *Harper's Magazine* for May, 1881, each of which were evidently written while the author was filled with new hope by the delusive invigoration of rest and the stirring air of the Adirondacks. Little more than a year from that time found him in his grave, another pitiful instance of the sarcasm of fate.

This collection of his stray poems, gathered and placed in permanent form by those who knew and loved him best, should plainly be viewed as an affectionate tribute to his memory, rather than a bid for notoriety. Read with the charity which in the nature of the case it demands, this book cannot fail to be appreciated.

Mr. Cook's chief claims to excellence as a poet are a sprightly and easy versification, and an aptitude, especially in his serious attempts, of enveloping each poem as a whole in the atmosphere, as it were, of his own peculiar mood; thereby not only fascinating the attention of the reader, but bringing him to that intimate sympathy with the subtler shades of the writer's mind which is so rarely attained. Like all young writers he is crude, and like all young writers he at times shows the influence of older minds upon his style. Thus, one may easily find instances when he reminds us forcibly of Holmes, Whittier, Bret Harte, and Aldrich. In our opinion, his style, notwithstanding an obvious individuality, closely resembles that of Aldrich. There are several of Cook's poems, notably "L'Envoi," "Her Cross," and "Awaiting the End," of which either Aldrich or Bret Harte might be proud. As was only natural for one whose innate sensitive disposition was accentuated by disease, his poems show him alternating between the most extravagant buoyancy and the blackest depths of despair. Thus, with a knowledge of his sad history, one reads his crisp, bright society sketches, and his easy flowing, well-handled humorous efforts, with as mournful an interest as the verses which express his earnest and manly thoughts as the gloom of his near future overpowers him. Here there is nothing of the lugubrious wailing of the lovelorn, fledgling poet, but the simple outpouring of a breaking heart.

LECTURES ON CATARACT: ITS CAUSES, VARIETIES, AND TREATMENT. Being Six Lectures Delivered at the Westminster Hospital. By GEORGE COWELL, F.R.C.S. With Illustrations. London: Macmillan & Co. 1883.

THIS treatise is meant for the use of students, and discusses the subject in an attractive style.

A NEW DEPARTURE IN THE THEORY AND PRACTICE OF MEDICINE. By C. A. HARDY, M.D., Graduate of the University of Pennsylvania. New York: P. O'Shea, 45 Warren Street. 1883.

IT would be impossible for us, in the small space allotted, to enter into the several details and arguments promulgated by the various theories presented. The author says: "For over thirty years I have entertained the belief that the nerve-force was some form of electricity or galvanism; that there was more than muscular or mechanical action in the heart-throbs; that nervous manifestations indicated some form of magnetic force besides the functional action of the organs." Regarding the nerve-force or vital principle, he likens the brain to a magnetic pile, in the cells of which the nerve-force is produced by the action of oxygen upon the constituents of the blood; and in conjunction with which, also, the spinal cord and ganglia and the sympathetic system act as reservoirs for storing up and distributing it. The heart and circulation of the blood is then taken up, the constant motion and action of which is also supposed to be controlled and regulated by the nerve-force generated in the brain-cells, and the derangement of which is followed by disease. The double long and short beat of the heart is, moreover, compared to the positive and negative actions of electricity. In support of these theories numerous arguments and well-founded reasons are offered, most of which will admit of deep study and examination. Chill and its consequent fever are also shown to be due to derangement or great vital depression of the nervous forces, and the subsequent reaction. Upon this principle the treatment of typhoid fever is presented, for which method the author claims the highest satisfaction. Malarial and yellow fevers, and diphtheria, which latter he regards as an erysipelas of the mucous membrane, are also interestingly considered. The chapter on contagion is not the least important. This theory rests upon that applied to the circulation of the blood. Erysipelas and its cure, the action of snake and other poisons, rabies, hydrophobia, etc., are also entered into with much earnestness, together with antidotal and other treatment. Dyspepsia and various gastric affections of the mucous membrane are further noted.

Reports of Societies.

VERMONT STATE MEDICAL SOCIETY.

(Special Report for THE MEDICAL RECORD.)

THE Semi-Annual Meeting of the Vermont State Medical Society was held at the Bardwell House, in Rutland, June 13th and 14th. The meeting was called to order at 11 A.M. by the Secretary, DR. J. S. RICHMOND, the President and Vice-President not being present.

DR. CHARLES L. ALLEN was called to the chair.

The Board of Councillors reported favorably on the application for membership of sixteen gentlemen, and they were duly elected.

DR. J. M. CURRIER offered the following:

Resolved, That the Publication Committee be instructed to insert in future issues of the "Transactions" of this Society the names of the members of the Society.

Adopted.

The Society then adjourned.

The Society was called to order at 1.30 P.M.

The following was offered by DR. FOX:

Resolved, That this association learns with regret of the

DEATH OF DR. CYRUS PORTER,

one of Rutland's most worthy and oldest practitioners, and we hereby tender our heartfelt sympathy to the family of the deceased.

Adopted, and a copy ordered to be furnished to the family of the deceased and the press.

DR. C. L. ALLEN was appointed to prepare an obituary for the annual meeting.

DR. POND exhibited his

SPHYGMOGRAPH

with mirror attachment, showing the pulse on a screen by reflected light; also reported cases of heart disease, including mitral, aortic, tricuspid, atheromatous disease, with characteristic traces of each and photographs of post-mortem appearances. He also exhibited a rare specimen of atheroma of the arch of the aorta, having a pulse like "Kussmaul's," caused by a longitudinal blocking up of the innominata; also a case of crushed head and brains in which almost every variety of pulse-trace was seen, tracings of diphtheria, mild and malignant, meningitis, typhoid fever, etc.

The Chairman introduced DR. A. J. LONG as a delegate from the Medical Society of the State of New York, and he was invited to participate in the discussions.

DR. CHARLES S. CAVERLY read a well-prepared paper on "Tubercle Bacillus of Koch."

DR. A. T. WOODWARD presented

A COMBINATION SPECULUM

of his own construction, for examining the rectum and female urethra, also a modification of the "Smith-Hodge" pessary which he has recently made.

In the discussion which followed Dr. Woodward's paper, DR. KIDDER claimed that there was no danger in dilating the female urethra, that he had repeatedly dilated it its whole length, and had had no other trouble than temporary paralysis; that dilatation with the forefinger will cure tenesmus.

DR. WOODWARD earnestly protested against more dilatation than was absolutely necessary. The meatus only should be dilated ordinarily. There is great danger of cystitis, paralysis, etc., from full dilatation into the bladder.

An obituary notice of Prof. S. W. Thayer, late of Burlington, prepared by DR. H. H. ATWATER, was read by the Secretary.

An obituary notice of Dr. R. W. Clark, late of Georgia, was read by DR. F. RUGG.

DR. EDWARD S. PECK, of New York City, read an interesting paper on the

USE OF JEQUIRITY IN CASES OF INVETERATE PANNUS OF THE EYEBALL,

based on an experience of seventeen cases (see p. 29).

The Society then adjourned to 7 P.M., at which time DR. C. L. ALLEN read a paper on

OLD AGE,

of which the following is an abstract:

Life, death; enjoyment, suffering; health, sickness—these are the never-ceasing objects of care and solicitude with every member of the human family. To secure the former and avoid the latter is the never-ending struggle of humanity. Individually or collectively, whatever is undertaken in the material world, whatever is manifested in the moral world, is but the evidence of this struggle—a struggle which will continue as long as sickness, suffering, death, are realities.

To live, to live happily, to live for a long time are the most universal desires of mankind. Yet there are no objects toward the attainment of which efforts are more blindly or less efficiently directed. To live happily, we may perhaps say, requires no effort or foresight on our own part. To live happily, without thought or care, may be the lot of some, but commonly it is the result only of long, well-directed, and unwearied labor, and hence really enjoyed by but few. To live for a long time requires such a rare combination of mental, moral, and physical qualities that only an occasional example is found.

The efforts of science have not yet been able to break the impenetrable seal which conceals the secret of life. We perceive life, we prove it, we enjoy it; its nature remains unknown, its essence beyond reach. But its principal acts, its most important phenomena are known and appreciated. These phenomena constitute the most solid basis for the study of man, in his totality, in his succession, in his growth, and in his decline. They show us that the life of man is one continual progression, and not only that, but a progression onward and upward, and of progression onward and downward.

The life of man has been variously divided into periods, or "ages," according to the object, fancy, or caprice of those who made the divisions. Several divisions were mentioned. The evolution of the human organism is not accomplished in all with the same degree of rapidity. There are old men at thirty years of age. On the other hand octogenarians are young and flourishing, by the vigor of their constitutions and the proper regulation of appetites and passions. The concatenation of acts by which life operates is invariable, but the rapidity of their succession is varied by a crowd of circumstances, some inherent in the being himself, others exterior to him.

At each period of life there is a corresponding form of health, a general manner of living. Idiosyncrasies change, temperaments alter, vital movements concentrate toward different cavities at different ages.

The infant is, as it were, a living sponge. The tissues are all soft, delicate fibres saturated with moisture, readily and rapidly losing or gaining in weight by the simple subtraction or addition of water. No organ or function escapes change as the necessary result of age.

The changes produced by age were then described as found in the bones, muscles, ligaments, skin, and hair. Then were noticed changes in weight, stature, digestion, nutrition, the ability to endure variations of temperature; changes in the circulation, including hæmatosis, and in the respiration. The effects of age were exhibited in the lymphatic system, in the nervous system, in the senses, in the intellect, in the reproductive function, and their organs. All these changes are in a constant progression in one definite direction. Commencing as near to a liquid condition as is compatible with life, it terminates in almost complete solidity. If death is the natural result of these changes, if they must all take place in a limited time,

can we know the limits of that time? Is there any definite period which is the physiological term of a man's existence? How many years ought a healthy man, with a sound constitution, to live? Nature is parsimonious in her labors, furnishing us with infinite variety of individual development, but with unity of type and design. Each class has its peculiar mode of evolution; each species has its definite period of existence; each stage of development bears a definite ratio to the whole life of the animal. Among mammals, to which class man belongs, the natural duration of life is from five to eight times as long as the period of growth (Hourens). By this standard the duration of man's life should be at least one hundred years, and ranging from that to one hundred and sixty or two hundred years. Instances were given of longevity ranging from one hundred and fifty to one hundred and seventy-five years.

But whether life be short or long, whether accident, disease, or physiological decay be its termination, death is sure to come—Death, the greatest mystery of nature; death, that phantom without a body, whose name alone stiffens us with terror; death, that horrible image of destruction, the idea of which, like a harpy, comes to infest all the courses of the banquet of life. Morals aside, man is certainly, in respect to his organic life, bound by a law of destiny more dire than that to which other animals are subject. Although of an inferior rank, they at least have pain without reflection, death without foreboding, an end without fear and without regret. With enlightened and intelligent man the thought of death is often present, openly or secretly, and the more often and more openly the older he grows. To the young man death seems so far off, and the cares, the duties, the joys, the incessant whirl of business are so engrossing that he has little thought and less fear of death. But to the aged man, whose mind has been enlightened by education, by reflection, by observation, by experience and contact with other intellects, the thought unceasingly recurs, and almost always with terror. Yet this fear of death is not simply the feebleness of age or weakness of mind. It is the instinct of preservation implanted in us by nature herself, which repulses the idea of destruction, and which acquires in the aged a power more despotic than in earlier years. In vain does the body waste; in vain do infirmities, cruel and painful, show themselves; in vain do the resources of the economy become exhausted; in vain does philosophy eternally repeat that life is fatiguing and vapid, that it is a heavy burden, that it is a tissue of weariness and evil, that it is a sombre tableau of misery and anguish. The old man accepts it all; he wishes still to live. Why does man so desire to live—so fear to die? Simply on account of his ignorance of what may be after death. We have no direct, sensible physiological evidence, even of existence after death, to say nothing of the modes or relations of that existence. It is true that the vast majority of men believe that to this short, material life succeeds another life, freed from organic molecular disaggregation, a life without relations with the constructive atoms of the material world; a life without change, without end, without death. But, revelation aside, neither reason, nor analogy, nor experience, nor the memory or testimony of men; neither inductive evidence, nor the action of the laws and metamorphoses of nature can enlighten us in the least upon this great subject. All is unknown, forever unknown; forever there is the silence of the tomb. This awful mystery may perhaps conceal the mysteries of another life, but the veil which covers it is as sombre as it is impenetrable. We walk by faith, by desire, by hope. We feel confident that Nature, however inflexible and implacable her laws, will not deceive us. She has given us intelligence, high aspirations and hopes, unlimited cravings for improvement, for perfection. She has implanted within us an innate desire, a powerful instinct, which excites us to hope for something permanent, something everlasting, beyond and above this finite world. If the few short days we live here are all of our existence, why inspire us with a chimerical inquietude concerning a future never to be realized? Why poison all our joys by the sad reflection that they are so soon to end? Why embitter our days by the gloomy comparisons of what we are with what we proudly hoped to be, of what we have with what we fondly wished to possess? No, Nature, ever attentive and provident for all her creatures, will not cheat her most cherished children. If in a material and physical point of view science cannot demonstrate a future existence, neither can it demonstrate the contrary. Hence we are free to rely upon moral, upon psychological proofs. Proofs of sentiment, the natural tendencies and aspirations of man, evidences of the heart—these amount to almost if not complete moral certainty. For the individual, in this life, we have growth, maturity, decline, and decay. In the next, we hope for progress, ever onward, ever upward, improvement upon improvement, development following development in a never-ending series. For the race the progress here is always onward and upward; there is no decline, no decay. Perfectibility is an attribute of humanity, and each generation of mankind is becoming happier, wiser, and better, and enjoying life longer than its predecessor.

Life is short but the list of diseases is long. Old age and disease appear to be twin brothers, forever inseparable. The contrast between the diseases of early life and old age were dwelt upon. Then the pre-requisites of a long life enumerated; but these being only partially under the control of the individual most concerned, are not elements in the real problem to be solved. For the man approaching or passing the epoch of the plenitude of his physical forces, to him who, having arrived at the highest pinnacle of organic energy, can hereafter only go downward, the question, urgent, momentous, engrossing, is, What can now be done to prolong life, to retard the rapidity of descent down the slope of life, to smoothe the pathway so that the descent may be without shocks and jars, without pain and sorrow? The learned, amiable, and good Reveillé-Paeise lays down four universal and all-important rules: 1st, Know how to grow old; 2d, Know one's self; 3d, Arrange wisely the habits of life; 4th, Combat disease at its commencement. To these I would add another equally conducive to long life, and more important than any in its bearing upon the happiness of the aged: *Rule 5th*, Have education, general intelligence, culture.

As age advances the well-trained intellect, the richly stored, highly cultivated mind feels no weariness, but enjoys quietly and fully the fruits of his former labors. How often, in my intercourse with the aged sick or ailing, have I had occasion to notice the difference in the happiness of two of equal age, placed in circumstances almost identical, both endowed originally with good constitutions—the one educated, cultivated, enjoying scientific research or philosophic meditations, the other not ignorant, indeed, but pleased with only light, transitory or sensational literature; the one contented, happy, and a source of pleasure to all around him, the other fretful, morose, complaining, neither enjoying life himself nor allowing others to do so; the one retaining intelligence clear and unsullied to the last moment, the other gradually losing his mental faculties long before death occurs.

How beautiful, how sublime is the sight of the aged man of culture, enjoying his "*otium cum dignitate!*" He has lived, he has flourished, he has played his part, perhaps, in public affairs, and now, respected and revered by all, he can pass serenely along the downward current, happy in the enjoyment of his intellectual faculties, in the remembrance of his early achievements, in the hope of a more brilliant hereafter.

The Executive Committee made the following assignment of subjects for the annual meeting, to be holden at Montpelier, October 10 and 11, 1883: "Liver," Dr. S. S. Clark, St. Albans; "Blood-stains," Dr. E. S. Munger, Put-

ney; "Localization of Cerebral Symptoms," Dr. X. H. Towsley, Rutland, and Dr. John M. Currier, Castleton; "Obstetrics," Dr. H. R. Jones, Benson; "Physicians' Testimonials," Dr. O. W. Sherwin, Woodstock; "Localizing Bullets" (new method), Dr. S. J. Allen, W. R. Junction; Obituary Notices: "Dr. Cyrus Porter, late of Rutland," Dr. C. L. Allen, Rutland; "Dr. J. O. Crampton, late of Winooski," Dr. Richardson, Winooski; "Dr. John L. Chandler, late of St. Albans," Dr. O. F. Fassett, St. Albans.

The thanks of the Society were voted to the gentlemen who had presented papers. At 9 P. M. there was an adjournment to the banquet.

The physicians and druggists of Rutland entertained about fifty members of the Society at the banquet. The large dining hall of the Bardwell was filled to its utmost capacity by the doctors and élite of the city. The banquet was elaborate and sumptuous. After the feast Dr. L. M. Bingham, President of the Society, led off with a speech and introduced the toast-master, Dr. C. L. Allen. Sentiments and speeches followed until a late hour. On Thursday the doctors and druggists chartered a special train of cars and took the Society and other invited guests to the West Rutland Marble Quarries. On their return, by special invitation of President Merrill, they visited the Howe Scales Works.

At 1.30 P.M. the Society was called to order and listened to a lecture by PROF. J. L. LITTLE, on Bigelow's method of crushing and removing stone from the bladder. Prof. Little exhibited instruments and detailed a recent successful operation on a patient seventy-seven years old. Dr. Little has operated for stone in the bladder sixty-six times, seven times by Bigelow's method. His shortest time for operating, fifteen minutes; longest, one hour and forty-five minutes. He says Bigelow's is the safest operation.

The thanks of the Society were tendered Dr. Little.

Dr. E. S. Peck, of New York, was made an honorary member of the Society.

THE ARMY MEDICAL MUSEUM AND LIBRARY.

The following resolutions were adopted:

Whereas, It is well known that the interest and advancement of medical science in the United States have been largely promoted by the valuable collection of specimens in the Museum of Military Medicine and Surgery of the Medical Department of the United States Army, as well as by its magnificent Library of rare and valuable books and by its numerous publications; and believing that all national works of this sort that so eminently contribute to the interests of humanity and to the welfare of our people should be protected and encouraged by the Government and people of this country; therefore,

Resolved, That the State Medical Society of Vermont will exercise all proper influence with Congress to provide for the Library of the Surgeon-General's office and Army Medical Museum an adequate appropriation to allow for the erection of a suitable fire-proof building for the safe and permanent preservation of the said materials, which are now exposed to constant danger from fire and loss.

Resolved, That we also urge upon Congress the propriety of said Museum and Library being continued under its present management, and that we earnestly recommend that the Library be maintained separate from the Congressional Library.

Resolved, That we further petition Congress to make suitable pecuniary provision for completing the publication of the "Index Catalogue" of the Library of the Surgeon-General's office.

Resolved, That a committee be appointed to convey to Congress the views of this Society upon the matters hereinbefore set forth, and that each member of our Society be requested to use his influence with the delegation in Congress.

Resolutions of thanks of the Society were voted to the physicians and druggists of Rutland, for their reception and entertainment, to the proprietors of the Marble Quarries, the Howe Scales Works, and to the several railroads for courtesies received.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

LORD WOLSELEY AND THE ARMY MEDICAL INQUIRY—THE OXFORD PROFESSORSHIP AND VIVISECTION.

LONDON, June 20, 1883.

THE Army Medical Inquiry Report continues to excite interest and criticism. The closer Lord Wolseley's evidence is examined the more unjust does it appear. During the campaign he officially expressed his satisfaction with the medical service in his telegrams and despatches. After the campaign is ended he officially repeats the substance of verbal complaints he made in Egypt, most of which ought to have been made to another department. It is really not putting his action in a false light to say that he appears to have been somewhat double-faced. The most charitable supposition is that his lordship's head has been turned by his peerage and his pension, and the opposition to the latter has doubtless not improved his temper.

It was manifestly unfair to contrast the army hospital at Cairo with Lady Strangford's. The former was dependent upon army officials for supplies of every description, which could only be procured through the ordinary channels. The latter was supported by private resources and its sick attended by a civilian medical staff. The son of a London physician—Dr. Sieveking—went out to work in its wards.

The necessary funds for building a physiological laboratory, etc., at Oxford have been voted by a very narrow majority (3 in a meeting of 193 members of convocation) on Tuesday last, June 4th. The opposition was partly on the score of economy (£10,000 being asked), but mainly on the ground that vivisections would be performed. The opposition to vivisection is plainly on the increase. It is, of course, chiefly in non-medical circles that this is the case, though it is an interesting fact that a pamphlet on the subject for private circulation was lately issued by a distinguished army surgeon, in which the author—Dr. C. A. Gordon, C.B.—maintains that no discovery has ever been made by vivisection that has ever proved of direct service in medical treatment that could not have been made without it. Dr. Gordon states that he commenced his study of the subject as one prejudiced the other way and that he has arrived at his conclusions through a dispassionate investigation of the literature of the subject. I think your readers will agree with me that the total abolition of vivisection is an event not to be desired. The restrictions that have been placed upon it in this country are no substantial detriment to real scientific investigators and were fully called for by the needless cruelties that have been perpetrated in the name of science. I could name at least one well-known physiologist in this country who is utterly callous as to inflicting *unnecessary pain* on animals, who only employs anæsthetics to keep the animals quiet and prevent them from biting, scratching, or otherwise annoying him, and who confessed before the Royal Commission on Vivisection that he had no feeling whatever for the animals he tortured. I refer to Dr. Klein. Some experiments on scorpions, made by Mr. C. Lloyd Morgan in Germany and deliberately described by him in *Nature* (February 1, 1883), were revolting in their cruelty. Mr. Lloyd tortured them in various ways to see if he could induce them to commit suicide. Amongst other ways he placed them in burning alcohol, in concentrated sulphuric acid, and burnt phosphorus on them, etc.

Mr. Lloyd admits himself that the phosphorus experiment was sickening. It is difficult to see what scientific value such brutalities can possess. It is such men and such deeds that bring odium on scientific and humanly conducted vivisection by such men as Foster, Sanderson, etc.

DOES THE RETENTION OF DEAD TEETH IN THE JAWS EXERT AN UNFAVORABLE INFLUENCE ON HEALTH?

To the Editor of The Medical R cord.

Dear Sir: The above question is the heading of a letter by Dr. Samuel Sexton in your issue of May 12, 1883, to which, if you will kindly allow me the space, I beg to answer.

In ninety-nine cases out of every hundred I should say yes, they do "exert an unfavorable influence on health," and for the following reasons: It is a well-known and generally understood fact that the dentine of a tooth (which forms the bulk of the tooth-structure) and the enamel receive their nourishment from the pulp; that the amount of organic material in dentine is about twenty-eight per cent., and that of the enamel from three to five per cent. When the pulp is destroyed the nourishment of this organic portion is cut off entirely, with the possible exception of a very limited amount, which may be furnished from the periosteum through the cementum, which surrounds the root; consequently the death of the organic portion of the dentine and enamel must necessarily follow. This dead substance remains as a part of the tooth-structure to constantly decompose. In the structure of the tooth the organic portion is united directly from the periosteum to the pulp, through the cementum and dentine alike. Consequently the dead and putrefying portion in the dentine is constantly in contact with the organic portion of the cementum, which is still living; that, under circumstances which determine an excessive flow of blood to the part, such as a severe cold, a blow upon the tooth, or a severe wrench in biting upon some hard substance, excessive absorption of the putrefying portion by the living takes place, I hardly think will admit of a doubt. No matter how perfectly the dead pulp may be removed and the canal filled, this condition still exists. The fact, however, is that the pulps *cannot* be perfectly removed from one-half the teeth where it is attempted, but a portion is left in the canals to putrefy and assist in the disturbance which too often follows. Another feature of the case is that not one-tenth of the teeth in which the pulps are dead is any attempt made at their removal. If any one will consider for a moment the number of people who have no dentistry done, and those who have it poorly done as compared with those who have the best dental services it is possible to obtain, they will, I think, readily admit the truth of the above statement.

The conclusion then is, that *no* pulpless tooth is absolutely sure to not make trouble. From the most perfect operation of removing the dead pulp and filling the canals (which by the way, should never be done with gold) to those where the entire dead pulp is allowed to remain in the teeth, there is more or less of a periosteal irritation, which is almost constant. It is true that the tooth, or teeth, may not be painful, but some remote part, such as the eye, or the ear, may be effected, or a neuralgia extending over the side of the face and head may be the result. Many cases like these have come under my observation, where the most perfect dental work had been done. In many cases, however, pulpless teeth, after treatment, are kept in the mouth for many years, and render good service without apparently producing any pain or distress whatever. Others will, upon the slightest provocation, become sore and very painful. This, however, in most cases can be sufficiently overcome by proper treatment, to warrant their retention, provided they are very useful. But when, after consultation, it is determined that the irritation produced by such teeth is more injurious to the patient than can be overcome by their service in mastication of food or otherwise, in my judgment they should be removed at once. I might cite many cases bearing directly upon this subject, but for the present the above will suffice.

I am, very truly yours,

Frank Abbott, M.D.

22 West Fortieth Street, New York, July 9, 1883.

MEDICAL MATTERS IN NEBRASKA.

To the Editor of The Medical Record.

Sir: You have doubtless received ere this a summary of the proceedings of the Nebraska State Medical Society, which met at Lincoln recently. In many respects it was a success, but as to any exposition in medical science it was lamentably deficient. Reports of sections were called for by the President, and for the most part answered by the Chairman of Committee in an avowal of ignorance that he was on the committee. Dr. Mansfelde, Permanent Secretary, made an exception to this, in the presentation, with notes, of a four-pound cystoid kidney. Discussions on diphtheria and hysteria were rambling and profitless—the report of a case of aconite-poisoning proved to be no such thing, and the only paper read (on vaccination) was a history and very incomplete. Discussion revealed the fact that non-humanized virus is in disrepute, and chiefly by reason of imperfection in the virus; but anything looking toward remedy of this was not effected. No action was taken in regard to ethics, in dispute at the National Association, but a strong supporter of the Association's action stated in a large gathering, that the sooner all *code* was abolished, the better. This I believe to be the general drift. The Committee on Medical Legislation reported informally that their efforts came to naught. In reality, those having it in charge were not the peers of homœopaths in the matter of *lobby*. The leading man is but a respectable fossil.

Being in hearty sympathy with the good work you have done, looking toward the elevation of the standard of medical education, I would like to note the advent of another medical school—in this West, to wit, the Medical Department of the University of Nebraska at Lincoln. It is in many respects a still-birth, for although the State Medical Society met almost in the shadow of this university building, no mention was there made of the same, while many seemed to think for the present it would not amount to anything. The Society, in its rounds, visited the Home for the Friendless (inaugurated last January), wherein the new school finds its hospital. This building is quite beyond the city limits, and at the time of our visitation, while not seeing any patients, we were told there was *one*. There is no excuse, in the light of education, for the school at all, and I take it the only incentive is that which too commonly exists: the furtherance in position of local medical men, who become associated with it. The Medical School at Omaha is fairly established, so its promoters inform us, but the position you took toward the same was undeniably just. The establishment of these schools is heralded by the press and public, even as they do any new institution, in a very gross and material way. Too often these are *institutes*, cure-all establishments, but all aflame with their disinterested greatness. It is the spirit of "boom," which at present is soul and body of our social fabric.

A feature of this year's State Society meeting was the simultaneous gathering of the homœopaths. While no reference was made in our meetings to distinctive position, our neighbors were brim full of it, and placed themselves on record. In striking contrast is it with the attitude exhibited at Albany by the New York homœopaths in their recent annual meeting. Their President, Dr. Mitchell, stated in his address that "our doses can vary from the largest old-school potion to the highest of our

infinitesimals," that the regulars "use our drugs in their true relation to disease," "understand the methods of palliation better than we do," and, moreover, that "there are cases where our law fails, or is inapplicable." Commenting upon which the *Springfield* (Mass.) *Republican* said, "It is plain if Dr. Mitchell fairly represents his own school, there is no longer any necessity for its separate existence." Here Dr. T. C. Duncan, of Chicago, in what is termed *the address*, stated, that "the difference between the two schools is as wide as ever." "Judging the future by the past, the union of the two schools is far remote," while "union could be brought about only in the recognition of their principles." Perhaps Dr. Duncan does not fairly represent his brethren; still, it is probably not their desire to sink distinctive titles at least, for with most of them this would be an appalling disaster.

Yours,

NEBRASKA.

THE QUESTION OF INEBRIETY AND DISEASE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: That advocate, *par excellence*, of the disease theory of inebriety, Dr. Crothers, again comes forward in a late number of THE RECORD, with a synopsis of cases, from which he deduces what he believes to be facts in support of his views. I see in none of them anything but a repetition of the old story of deficient will-power in the presence of an evil. His first case is that of A. B——, a prominent physician, by the way, who had graduated with honors, fell through the ice into the water, which event was followed by pneumonia, and this in turn by a condition of nervousness, for the relief of which he began the use of spirits! Verily, his knowledge of materia medica must have been meagre! Of course, his "nervousness" gradually required larger doses, and as spirits was the best sedative he could find, notwithstanding his efficient medical training, he became a confirmed inebriate—a coward, finally, in principle and in morals, for he endeavors to throw the blame from himself in that he says "his inebriety began from some physical condition, and that through the treachery of friends he was made worse." He finally landed in prison, where, in the absence of his scientific remedy for nervousness, he seems to have recovered both from it and his intemperance. Dr. Crothers thinks the pneumonia was followed by acute asystolism. This may be so, though it is hypothetical, and the treatment certainly questionable.

The second case, C. O——, was also a medical student of long training, and for some time professor in a medical college. One day he became "accidentally (?) intoxicated," and soon after was forced to resign, went from bad to worse, and finally brought up in an insane asylum, a lunatic from the excessive use of spirits. It transpires, however, that two years before he became "accidentally intoxicated" he had habitually made use of brandy for the production of sleep. It is a singular circumstance that, though a medical professor, he failed to find any remedy so effectual for this purpose as brandy. This gentleman too, seems to be blind to the true cause of his weakness and says, "his inebriety began from neurasthenia and heart exhaustion." The third case, that of a theological student, runs about the same course, and ends with the same sort of an apology. "He began to use spirits in the seminary for a tonic, used it quite freely while supplying his pulpit, but always at night." These are only a few of the doctor's synopsis of cases, and while I say nothing of the palpable fact that they represent an entirely exceptional class of inebriates, we can even in these selected cases plainly see the moral forces at work in their causation.

We have been told of heredity as being active in the production of drunkenness. That this is a prolific cause I do not doubt, but that it is wholly, or even in a great degree a physical heredity, I do not believe. The inebriate is an inheritor, to some extent, of his forefathers' special curse; not of this particular sin necessarily, but rather of the atmosphere in which his progenitors lived, of the moral conditions which surrounded them, of the general depravity of tone which as a rule marks the homes where are reared the young inheritors of the parents' weakness. The child reared in the home where profanity is daily used and where no regard is had for good morals is very likely to grow up in conformity with his teaching; that one born into the home of the inebriate, subject to such environments as surround him there, will do the same. The heredity of influence and surroundings is a potent factor in the production of inebriety.

But suppose for a moment we allow that inebriety is always a disease, may we not with equal propriety assume that all sin—or that we are used to call sin—has a physical basis; that what we have heretofore regarded as a deficient moral status has really its origin in some congenital or acquired moral defect? Is it not as reasonable to suppose that an act by which one person commits violence upon another, or takes that which is not his own, has its origin in a physically diseased condition, as that this is true of the person who commits violence upon his own mind and person by subjecting them to the overwhelming influence of intoxicating drinks or narcotizing drugs. It seems to me that this is the legitimate conclusion, though the logical result of the argument would be that *all* action, right or wrong, has a physical basis, healthy or diseased, but for which in either case the individual is not responsible.

Dr. Crothers dwells frequently upon what he calls "obscure" causes. I confess they are so when viewed as he views them. It is doubtless true that obscurity will be thrown around any study when we try to bend facts connected with it to any single idea. We can study inebriety neither as moralists nor scientists wholly, but must be prepared to recognize the fact that some cases depend upon one cause, some upon another. That there are cases of inebriety that depend upon physical causes I am ready to admit, and have done so; but to say that "it is always a disease" is a dogmatism without even the redeeming quality of truth.

J. B. STAIR, M.D.

SPRING GREEN, WIS.

FISKE FUND.—The Trustees of the Fiske Fund, at the annual meeting of the Rhode Island Medical Society, held at Providence June 21, 1883, announced that they had made no award on the subjects proposed for the present year. They propose the following subjects for the year 1884: 1. "The Origin and Progress of the Malarial Fever now Prevalent in New England." 2. "Original Investigations in Household Hygiene." For the best essay on either of these subjects worthy of a premium they offer the sum of $300. Every competitor for a premium is expected to conform to the following regulations, viz.: To forward to the Secretary of the Trustees, on or before May 1, 1884, free of all expense, a copy of his dissertation, with a motto written thereon, and also accompanying it a sealed packet, having the same motto inscribed upon the outside, and his name and place of residence within. Previously to receiving the premium awarded the author of the successful dissertation must transfer to the Trustees all his right, title, and interest in and to the same, for the use, benefit, and behoof of the Fiske Fund. Letters accompanying the unsuccessful dissertations will be destroyed by the Trustees, unopened, and the dissertations may be procured by their respective authors if applications be made therefor within three months. Job Kenyon, M.D., River Point; Oliver C. Wiggin, M.D., Providence; Horace G. Miller, M.D., Providence, Trustees. Charles W. Parsons, M.D., Providence, Secretary of the Trustees.

New Instruments.

TONGUE DEPRESSOR AND NASAL SPECULUM.

By D. H. GOODWILLIE, M.D.,
NEW YORK.

FIGURE 1 represents a new tongue depressor with the following description, viz. :

The portion that touches the tongue is concave, and as the base of the tongue is nearly always convex, it fills up this concavity when first placed on it. When pressure is made on the tongue it flattens out under the depressor and produces a vacuum in the concavity, thus holding it firm upon the tongue, which can now be drawn forward, or laterally, without any discomfort to the patient. When the tongue is depressed sufficiently, then let the shank, which is slender, rest on the lower incisor teeth.

FIG. 1.—Tongue Depressor and Speculum.

The handle is held to the depressor by a thumb-screw, and is so arranged as to hold it on either side, or in front of the chin. In some cases the handle can be so placed as to come under the chin, and so make the depressor self-sustaining. The depressors are of two sizes, for adults or children.

The advantages are that it depresses well the base of the tongue, and holds it securely by the suction power, and without any discomfort to the patient.

The handle is conveniently held by operator or patient, and to one side of the mouth. It can be easily kept clean.

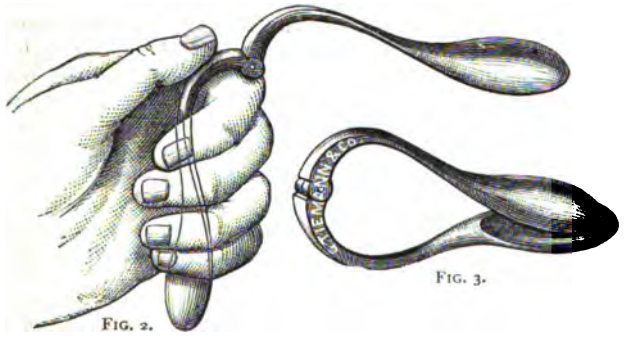

FIG. 2.

FIG. 3.

FIG. 2.—Folding Tongue Depressor. FIG. 3.—Folding Pocket Depressor.

Figure 2 represents a folding tongue depressor, having two sizes.

Figure 3 represents a folding pocket depressor, having two sizes.

The nasal speculum is only introduced here to show the best way of using it. A description was given of it in THE MEDICAL RECORD some time since. The instrument is made by Geo. Tiemann & Co., N. Y.

A MODIFICATION OF LORING'S OPHTHALMOSCOPE.

By J. B. McMAHON, M.D.,
NEW YORK.

SOME five years ago Dr. Loring brought to the notice of the profession an ophthalmoscope, carrying fifteen lenses on a disk and four on a movable quadrant. In the number of possible combinations and the ease with which their values could be read, nothing was left to be desired.

Fig. 1.

In none of the forms of this instrument hitherto in use has it been practicable to rotate the quadrant without moving the instrument from the eye and so interrupting the examination.

To obviate this difficulty, and, at the same time, by a slight alteration in the arrangement of the lenses, to get a much more efficient "fine adjustment" has been the object aimed at in the instrument to which I would call the attention of your readers.

The instrument has the ordinary tilting mirror. The main disk, as in Loring's, has an aperture and fifteen lenses, ranging from, +1 D. to +7 D., and from −1 D. to −8 D. The second disk has four lenses, ± .5 D, + −16 D., and an aperture arranged as shown in Figure 2. The cut indicates also the five small holes in which the pin of the centring spring plays. This disk serves as a cover for the first, its own lenses being protected by a metallic sector, partly cut away (*vide* Fig. 1).

The main disk is revolved by means of a milled edge the second, by a milling raised on its posterior surface just within its edge. Both disks are centred. The centring springs, one of which is seen in Fig. 1, surrounding the thumb-screw, secure a perfectly smooth, uniform, and independent motion of the two disks.

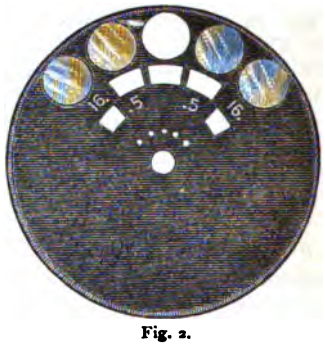

Fig. 2.

The instrument is light and compact. Its mechanism is simple. The glasses are efficiently covered. All the numerous combinations can be obtained without removing it from the eye, and with as much ease and certainty as in using the single disk ophthalmoscope.

For ordinary work the main disk suffices. If, however, a nicer determination of an error of refraction be desired, a slight movement of the second disk, in either direction, increases or diminishes, by a small refractive interval (.5 D), the power of the lens of the main disk that is in use, thus affording a true "fine adjustment." In doing this, the finger is slipped from the milling on the edge of the first disk, to bear lightly on the milling and posterior surface of the second, and so rotate it, the motion being a very easy one.

The use of the combinations in which the ±16 D lenses take part is quite simple. For example, the revolution of the main disk gives +7 D. A movement of the second gives +7.5 D. Both disks can now be rotated simultaneously, still in the same direction, the resulting combination being + 8 D. The higher combinations are obtained as in Loring's, by a continued revolution of the main disk. The reading of their value is practically the same in both instruments.

As so much depends on the accuracy of the mechanism, it is but just to add that Meyrowitz Brothers, after the expenditure of much time and labor, have succeeded in making the instrument at once handsome and reliable.

A PRACTICAL AND SIMPLE WAY TO MAKE THOROUGH APPLICATIONS OF POWDER TO THE POST-NASAL REGION.

By T. HAMILTON BURCH, M.D.,

CLINICAL ASSISTANT, THROAT DEPARTMENT, MANHATTAN EYE AND EAR HOSPITAL.

FINDING difficulty in some cases of making thorough applications of powder to the post-nasal region, without covering a great deal of unnecessary sound tissue, I have had Reynders & Co. make me two thin bulbous-pointed

hard-rubber tubes about three and one-half inches long, and in diameter tapering from one-fourth of an inch at base to one-third of an inch at apex (the dimensions will depend upon the size of the nares, and it would be well to take these measurements for the largest size) and perforated at the end; one with an opening looking directly forward, and the other with three openings, one looking forward and one at each side looking backward.

The terminal opening in the latter being one-half as large as the other two. The object being that the stream of powder will be diverted and an equal amount directed through the side orifices, thereby covering as much of the upper pharynx and post-nasal region as is desired. The tubes can be adapted too, and made with a thread so that they can be screwed upon the stopper part of the powder-blower.

This instrument is very simple and practical, and, if desired, patients can be fitted with the proper size and instructed how to introduce it and follow treatment at home.

It is not too much to say that the old way of deluging the whole nasal tract with powder does very often more harm than good. It is hoped by the aid of these tubes to render the application of powder more scientific than heretofore. The accompanying illustration will give a better idea of the instrument than my article.

NEW YORK, June 29, 1883.

THE MEDICO-LEGAL JOURNAL.—We have received the first copy of this new journal. It is published under the auspices of the Medico-Legal Society and contains papers read before that body. It has a well-filled editorial department. Being the only journal of this character in the English language, it may naturally expect success. The first number promises well.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from June 30, 1883, to July 7, 1883.

HEGER, A., Major and Surgeon. Relieved from the further operation of paragraph 9, S. O. 55, C. S., Department of Texas, and will return to his station, Fort Clark, Texas. S. O. 69, par. 2, Department of Texas, June 25, 1883.

HAVARD, VALERY, Captain and Assistant Surgeon. Assigned to duty with expedition to complete the survey of the country west of the Rio Pecos, Texas. S. O. 68, par. 8, Department of Texas, June 22, 1883.

RAYMOND, HENRY I., First Lieutenant and Assistant Surgeon. Granted leave of absence from July 14, 1883, to September 1, 1883, with permission to go beyond sea, and resignation accepted to take effect September 1, 1883. S. O. 150, A. G. O., June 30, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 7, 1883.

LEACH, T. W., Medical Inspector. Detached from the U. S. S. Tennessee, and as Fleet Surgeon of the North Atlantic Station, and placed on sick leave.

RHOADES, A. C., Medical Inspector. Detached from the Naval Academy and ordered to the U. S. S. Tennessee, and as Fleet Surgeon of the North Atlantic Station.

Medical Items.

MAY THE PROFESSION DEFY PUBLIC SENTIMENT?—An answer to the question which heads these remarks presupposes the profession to be as one man having to do with the great public. No one among the public can gainsay the firmness and independence of the profession as a whole, in the matter of observance of the standard of ethics which it set up some forty years ago. No one, moreover, but will admire its faithfulness to that standard. Is it not time, however, to inquire whether the almost universal condemnation and ridicule which the public is showering on that standard does not suggest a necessity for its revision with a view to conforming it to the spirit of the age, with which spirit the expressions of public opinion show it to be in conflict? And does not the persistence of the American Medical Association, in refusing to recognize the public sentiment in this matter, suggest a suspicion that its firmness and independence have degenerated into obstinacy?—*The Medical Age.*

DR. H. P. STRONG, one of the most prominent physicians in Wisconsin, for thirty years a resident of Beloit, died in that city on June 20th, aged fifty-one. Dr. Strong had received many honors in his own home, among them that of having held the office of mayor for five years. During the war he was surgeon of the 11th Wisconsin Regiment. As a member of the State Medical Society he had filled the offices of secretary and of president, and at the time of his death he was a member of the Wisconsin State Board of Health. Dr. Strong was a brother of William B. Strong, President of the Atchison, Topeka and Santa Fe Railroad, and of James W. Strong, President of Carlton College, Minnesota.

THE POSITION OF THE NAVAL MEDICAL SERVICE AS REGARDS THE CODE OF ETHICS.—In concluding a paper on "Medical Education" before the meeting of the American Medical Association, Dr. A. L. Gibon made the following remarks, which define his position as regards the Code of Ethics, a position which he states receives the approval of the Surgeon-General of the Navy: "It

is almost an insult to the intelligence of the members of the Association to explain that this paper ('Medical Education the Fundamental fact in Medical Ethics') is not intended as a sectarian attack upon the organic law of the American Medical Association, but as this interpretation has actually been given to it by over-sensitive partisans, I deem it proper to reaffirm my loyalty to the code to which I have subscribed, without, however, surrendering the right, which in common with every intelligent man I claim, to criticise what I may think objectionable, and to call attention to the inconsistencies of its avowed adherents who, attempting to observe its letter, injure its spirit. I fail to see why honest advocates of its principles should be placed in an attitude of 'rebellion' for merely defining these principles by the more liberal light of this day. The code properly interdicts any admission of the orthodoxy of the professors of exclusive dogmas, whether of homœopathy, allopathy, hydropathy, or the like, but it nowhere prohibits the intelligent physician giving his advice to whomsoever may seek it, especially when emergencies and the dictates of humanity demand. No one can more energetically discountenance than myself the impossible co-treatment of any case of disease by an educated physician and a charlatan, empiric, quack, or ignoramus however regular, but it is quite another matter when one's opinion is solicited in the interest of suffering humanity. I have yet to hear of any one of our profession soliciting an opinion from any of these, and without such an interchange of views there can scarcely be considered any *consultation* in the sense of the clinical co-operation properly denounced by the code. Any narrower assumption will, as I have endeavored to show in this paper, necessitate the ostracism of these your famous colleagues who have associated as fellow medical members with homœopaths and eclectics in the professional work of the National Board of Health, State boards of health, boards of medical examiners, etc., and I feel assured that the overwhelming sentiment of the American Medical Association will sustain the liberal interpretation I have here given the code."

Vivisection in France.—Not long ago Professor Brown-Séquard, in lecturing at the "Collége de France," decided to have, as is customary with him, a public demonstration showing the anæsthetic action of carbonic oxide on the larynx. For this purpose he had provided a small monkey. Without administering anæsthetics, Professor Brown-Séquard was about to begin his experiments when a lady suddenly arose and with her umbrella knocked the weapon out of the hands of the astonished scientist. The lady was at once ordered to leave, but declined, and said that she would repeat her action as the only possible protest, so that at least the "barbarous methods of vivisection" should not pass in silence. The usher was equally unsuccessful in appeasing her, and it was only at the instance of a gendarme specially summoned that she consented to leave, which she finally did, accompanied by two of the professor's pupils to the "Commissariat de Police" for mutual explanations. The Paris *National*, in reporting the circumstances, says that the action of the lady was a little too severe, but thinks that France might at least, like England, limit vivisection to classes for original work, and forbid its public displays.

Parasites in the Lungs.—Dr. Thomas Mann, of Portland, Oregon, writes for information regarding a curious case in which the patient coughs up parasites from the bronchial tubes. The trouble has lasted for a year. Twenty-eight have been coughed up within two weeks. They are coughed up generally along with mucus and blood. The young ones have black heads and a thick white body about one-fourth of an inch long. The mature specimens are longer. The history of the case is as follows: Patient, female, aged twenty-one; native of England; well developed; weight, one hundred and twenty pounds. Came under observation just one year ago, November 26, 1881. Arrived that day direct from England, suffering from sore throat and nostrils excoriated; breath fetid and offensive; pain in chest just below right and left clavicle; whole length of sternum and muscles of the neck sore to the touch; ulcer on right side of upper part of larynx to the right of epiglottis. All these symptoms have continued. In addition there was menstrual irregularity with hemorrhage from the air-passages at menstrual periods. This, however, is corrected.

Treatment thus far, after trying various remedies without permanent good result: On November 14, 1882, I gave inhalation of terebinthina to anæsthesia. On November 15th two parasites were coughed up, but with so much pain that carbolic acid was substituted as an inhalation, at times using hot water as a vehicle. From twelve to sixteen hours after this one or more parasites are coughed up. When mature ones are coughed up they come in pairs, and pairs are sometimes followed by from two to four young ones. The sputa, I might state, in which the parasites come up smells very strong of turpentine. The carbolic acid inhalations do not seem to be followed with such good effect. The patient is in good condition and attending to business. Dr. Mann has consulted Cobbold, but without getting any light.

Large Doses of Morphia.—Dr. J. A. Rafter, of Holton, Kansas, writes: "In your issue of May 5th appeared an article in regard to morphia poisoning, which has been pretty regularly 'sat down' upon nearly every week since. The dose of morphia supposed to have been taken was something like six grains. Ages of the men, I believe, not stated. A year ago I was treating a case of dysentery; had tried almost all of the usual remedies with unsatisfactory results. The case continually grew worse, and was in an extremely critical condition. Being sent for in great haste one day, on my way to the house I stopped at a drug store and got (by weight) six grains of acetate of morphia and thirty grains of oxalate of cerium, determined to give it a trial (though I had been using small doses of morphia sulph.). The powders were in separate packages. I took from each what I needed—about two-thirds grain morphia and eight grains cerium—Charts No. 2, with directions to give one, and if distress was not relieved in an hour to repeat. I then stowed the larger packages away in a stand drawer in an adjoining room. Called again three hours afterward, found that a mistake had been made in giving the powders. The large ones had been administered instead of the small—oxalate first, and an hour after the morphia. Patient completely narcotized; respiration two and one-half per minute, and the poisonous effect of the drug as well marked as I cared to see it. At once I gave an emetic, following it with strong coffee and belladonna. I administered good-sized doses of the tincture (ten or twelve drops), and repeated often; probably gave a drachm in all. Also gave shower baths and made every exertion possible to rouse my patient; at length succeeded, and, perhaps it is needless to say, he was troubled no more with dysentery. As this case was my own father, and his age over seventy-one years, at that time, I did not regard the case as Dr. Phelps does Dr. Willians's article, 'very funny.'"

Hydrophobia and the Bite of the Common Skunk.—Dr. Howard Jones, of Circleville, O., writes: "Upon careful inquiry throughout some of the Western States, I have collected the histories of fifty-two cases of bites from the common skunk—mephitis mephitica. Assuming these cases to have been accurately related to me, they may be classified as follows: Whole number of persons and dogs reported bitten, 52; number of persons bitten, 25; number of dogs bitten, many several times, 27. Whole number of persons and dogs that died from these bites with symptoms of hydrophobia, 8; number of persons that died from these bites with symptoms

of hydrophobia, 7; number of dogs that died from these bites with symptoms of rabies, counting a dog that was shot to prevent doing injury, 1. The above cases may be again divided into two classes, and each of these may be subdivided as follows: A—1, number of persons bitten while attacking skunks, 16; 2, number of persons attacked by skunks and bitten, 9. B—1, number of dogs bitten while attacking skunks, 27; 2, number of dogs attacked by skunks and bitten, 0. The number of persons that died with symptoms of hydrophobia out of the sixteen in subdivision 1 of class A=0; the number of persons that died with symptoms of hydrophobia out of nine in subdivision 2 of class A=7. The number of dogs that died (or was killed) with symptoms of hydrophobia, out of the twenty-seven in subdivision 1, class B=1. From the above considerations the following conclusions may reasonably be drawn: *First.*—All skunks are not rabid, or, if they are, only about fifteen per cent. of their bites inoculate on men and dogs considered together; while of men bitten, twenty-eight per cent. inoculate and prove fatal, and of dogs bitten, only about four per cent. inoculate. This difference in susceptibility between men and dogs evidently does not exist, and the difference in per cent. of inoculations must be accounted for in another way about to be suggested. *Second.*—When a skunk departs so far from its natural habits as to make an attack with its teeth without any provocation, it is fair to suppose that it is suffering from some disease which has largely changed its nature. This conclusion is strengthened by the fact that out of the twenty-five persons bitten while endeavoring to make angry or kill the skunks (in most instances the animals were in steel-traps), not one suffered any other effects from the wound save the ordinary soreness; while of the nine persons that were attacked by skunks and bitten (in most instances the persons were asleep upon the ground when bitten), seven died with symptoms of hydrophobia, making a mortality of nearly eighty per cent. It may be added that the dog mentioned in division 1, class B, which was killed on account of his having rabies, probably attacked a skunk suffering with the disease. That the bite of the common skunk is, under certain conditions, dangerous, and even extremely fatal, there can be no doubt, and there are many reasons for believing that the disease is identical with rabies in the dog or hydrophobia in man."

The Physicians of New York City and New York State.—"The Medical Register" for 1883, just issued, gives a list of 2,684 physicians living in the State. The New York City list contains 1,661 names. According to this, the number of (medically) registered physicians in this city is nearly two-thirds of the whole number in the State.

The number of Brooklyn physicians in the list is 510. One hundred and twenty-six of those in the New York list are serving in the hospitals and asylums.

Is Tendency to Death during Parturition Hereditary?—Dr. W. Henry Day, in a letter to the *Lancet* asks this question and cites some cases which seem to prove the affirmative. In one case, a mother, grandmother, and great-grandmother all died in their first confinement.

Chloroform Narcosis during Sleep.—Dr. W. A. Mansfield, of Champaign, Ill., referring to Dr. Girdner's article on this subject, writes (*Chicago Medical Review*) that he has recently successfully chloroformed a young man during sleep. He produced profound narcosis. The man did not know that the experiment was to be tried.

Medical Gems from "English as She is Spoke."—A work entitled the "New Guide of Conversation in Portuguese and English" has recently achieved a very wide celebrity. The author, Signor Pedro Carolino, has set forth Portuguese idioms, phrases, and anecdotes with their English equivalent, as he regards it. The result has been most extraordinary and amusing, the more so as the book is evidently written seriously and in good faith. We append the following formula:

"*For to Visit a Sick:* How have you passed the night?—Very bad. I have not sleeped; I have had the fever during all night. I feel some pain every where body.—Live me see your tongue. Have you pain to the heart? Are you altered?—Yes, I have thursty often.—Your stat have nothing from trouble some.—What I may to eat?—You can take a broth.—Can I to get up my self?—Yes, during a hour or two.—Let me have another thing to do?—Take care to hold you warme ly, and in two or three days you shall be cured."

The following comes under the head of Anecdotes.

"A physician eighty years of age had enjoied of a health unalterable. Theirs friends did him of it compliments every days: Mister doctor, they said to him, you are admirable man. What you make then for to bear you as well?—I shall tell you it, gentlemen he was answered them, and I exhort you in same time at to follow my example. I live of the product of my ordering without take any remedy who I command to my sicks."

The American Association for the Advancement of Science holds its thirty-second annual meeting at Minneapolis, Minn., August 15th, 16th, and 17th. Professor C. A. Young is the President-elect.

Bequest for a new Medical College.—The late Dr. Eliphalet Clark, of Deering, Maine, bequeathed several valuable lots of land with which to found a medical college.

The Consistency of our Medical Laws.—The Legislature of the State of New York has decided that "no person duly authorized to practise physic or surgery shall be allowed or compelled to disclose any information which he may have acquired in attending any patient in his professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon. "It is difficult to reconcile this pronouncement," says the *Medical Press and Circular*, "with the fact that in New York any physician is liable to be clapped into jail and fined $50, if he does not give public notice that his patient is suffering from infectious disease."

We quite agree with our contemporary in this view. The obligation put upon medical men to notify, without compensation or return of any kind, the existence of infectious disease is an encroachment upon individual liberty which we trust the profession will in time resent.

Women Doctors for India.—The project for introducing medical women into Bombay is now fairly established, upward of forty thousand rupees having been already subscribed for this purpose. The *Hindoo Patriot* states that the scheme includes the bringing out of women doctors from this country; the establishment of a dispensary for the poor; medical education for female students, through the Grant Medical College; and, finally, the establishment of a hospital for women and children.

Dr. Shoshee Bhoosur Mookes Gee is the name of the President of a new Homœopathic Medical College recently founded in Calcutta, India. The name carries with it a mystical significance well calculated to attract the transcendental.

The Extension of Vice.—Professor J. Edwards Smith has devoted a year to the study and discovery of adulterations in homœopathic medicines! When adulteration strikes the attenuated and gossamer fabric of the *sim. sim. cur.* materia medica, we may well believe that vice reaches every fibre of our social system.

Digestion and Condiments.—How digestion is affected by such condiments as salt and vinegar has been studied by M. C. Hasson, and the results presented in a paper read before the Academy of Sciences, Paris. Taken in moderation these condiments are useful. They pro-

mote the secretion of the gastric juice. But if they are indulged in to excess they irritate the coats of the stomach and render the food more indigestible. The proportion of salt should not exceed 5 to 10 grains to 0.5 kilogramme of meat, and of acid 1 to 4 per 1,000.

YELLOW FEVER AT VERA CRUZ.—For some months yellow fever has prevailed extensively at Vera Cruz, especially among the Americans and Europeans. It is said that one thousand deaths have occurred within the past two months.

DR. A. W. FOOT has just been elected Professor of the Practice of Medicine in the Irish College of Surgeons.

MEDICAL SCHOOLS FOR WOMEN IN CANADA.—Our Canadian brethren have a *penchant* for medical women. A Medical College for Women has been organized in Toronto, and a second one, it is said, is likely soon to be established. A similar college is likely to be organized in Kingston.

THE DELAWARE STATE MEDICAL SOCIETY held its annual meeting at Wilmington June 12th. Dr. Robert M. Hargadim, of Felton, was elected President; Dr. Willard Springer, Vice-President; Dr. George W. Marshall, of Milford, Secretary; Dr. J. W. Sharp, Treasurer.

DRIVING OUT A QUACK.—A man, calling himself Dr. Hale, of Edinburgh, came to Wheeling, W. Va., a short time ago and began to deliver lectures and practise medicine. He also distributed a paper of a low character, called *Health and Home*. He was promptly driven out of the State by the Board of Health.

THE HYPODERMIC INJECTION OF AMMONIA.—The value of intra-venous injections of ammonia has been attested. The following case sent us by Dr. Willis Cummings, of New Canaan, Conn., seems to show that ammonia may be equally valuable given hypodermically. We regret that our correspondent did not assure himself more positively whether the sun or alcohol had the most to do with his patient's prostration. Dr. C. writes: "Was called to see a young man said to be overcome with the heat. Found him in a stable lying on his back, in a perfectly relaxed and apparently anæsthetic state. Was unable to arouse him by pinching, slapping, shouting, or pounding his feet. He had been drinking largely of cider brandy in the morning, after which he took a long ride in the sun, wearing a silk hat. Had been unconscious about an hour and a half before I saw him, which was about 3.30 P.M. Found pupils slightly contracted, head cold, under jaw slightly fallen, extremities cold, and also the whole body, particularly the epigastric region; respiratory movements hardly perceptible to the eye, but little more so to the hand. Heart-beat greatly reduced in force, though pulse was about 100 and very weak. Before I came ammonia had been applied to nostrils and rubbed on back of neck. Cold douches to head, and rubbing extremities had been tried. After using the ordinary means of treatment and getting no satisfactory results whatever, I put four or five drops of ordinary water of ammonia to about a teaspoonful of water, and gave ten drops of this solution hypodermically in the left arm. Within five minutes he was conscious. Before coming to, his cervical muscles twitched a little, and the upper thoracic muscles seemed to contract slightly, making him expire freely with a short, full inspiration. Within the next ten minutes he was walking with the aid of a friend, fully restored to consciousness and able to swear at the pain in his arm. Of course there was a pretty active inflammation at the seat of puncture from the needle. Altogether it was less than ten minutes between the time that he seemed to be at the point of death and the time he was on his feet. He was kept in the shade for about two hours, when he got into his wagon and rode off, a little dazed, but perfectly conscious, especially of the red spot on his arm."

DEALING IN PAUPER CORPSES.—The Chicago Grand Jury has presented to court a strong condemnation of the practice of selling corpses which prevails in that city. It is thought the communication will result in putting an end to the traffic in the bodies of paupers which has convicted the county undertaker. The competition for this position was so great at the meeting of the Commissioners recently, that one party offered to bury paupers for $1.23 each. The demonstrators of anatomy of the various medical colleges of the city, as well as other men eminent in the medical profession and thoroughly acquainted with the subject, have requested such a change in the system as would give the colleges, in *pro rata* quantities, the material to which they are entitled, the colleges promising to insure the county from expense by paying such prices for the materials as will cover the cost of its transportation to them, and they suggest that any balance arising to the credit of the county be applied to the better care of those bodies that must be buried.

ADULTERATIONS IN LARD.—It is openly admitted by the lard-dealers of Chicago that all lard is adulterated from ten to fifty per cent. In all but the worst grades the adulteration is harmless, being oleo-margarine, cotton-seed oil, vegetable oils, and tallow.

THE FIRST POST-MORTEM IN AMERICA.—Dr. J. R. Quinlan, gives an account of the first post-mortem made in America. It dates twelve years earlier than that which occurred in Massachusetts, and has been supposed to be the first: "At a Provincial Court, held at Patuxent, for the Province of Maryland, September 23, 1657, whereas, it is thought requisite that a view be taken of Henry Gouge, who is suspected to have been brought to an untimely death by his master, John Dandey, and whereas it is conceived that this cannot be had so conveniently in time, as by a competent jury to take a view of said corps, the Court doth order that Mr. James Veitch be hereby empowered to go to the place where the said Henry Gouge was interred, and to call so many of the neighbors as conveniently can be procured, with two *chirurgeons* viz: Mr. *Rd. Maddocks* and Mr. *Emperor Smith*, and after said neighbors and the two chirurgeons have taken a diligent view of the said corps, then the said chirurgeons, in the view of those present, *are to take off the head of said corps, and, after diligent view and search, to signifie, under their hands*, how they find *said head and corps*, are to cause the said *head* to be *carefully lapped* up and *warily brought* to the *Court*, with what convenient and possible speed as may be." The return of this jury, rendered to the court September 24, 1657, runs thus: "Whereas, according to the order of the court, we have proceeded and diligently viewed the head of the corps of Henry Gouge, and laid open to us by the chirurgeons, which was ordered by the court to view and lay open to us. We detest (sic) under our hands that we can see nor find nothing about the said head, but only two places of the skin and flesh broke on the right side of the head, and the skull perfect and sound and not anything can or doth appear to us to be any cause of the death of the said Gouge, and also we do *detest* that we did endeavor what possible in us lay, to search the body of said corps and could not possibly do it, it being too noysome to us all and being put at first into the ground without anything about it, as the chirurgeons and the sheriff can satisfie you, this is the truth and nothing but the truth as witness our hands and seals, this 24th day September, 1657. And according to the order we have *delivered* the said *head* in the hands of the sheriff."

INTRA-UTERINE VACCINATION.—Dr. Truzzi vaccinated a number of pregnant women during the last three months of gestation, with a view to determine the protection, if any, afforded to the child. The results were negative, as the children were all successfully vaccinated a few days after birth.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 3 NEW YORK, JULY 21, 1883 Whole No. 660

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Original Articles.

ON THE PATHOLOGY AND TREATMENT OF CERTAIN FORMS OF NERVE-WEAKNESS.[1]

BY C. L. DANA, A.M., M.D.,

PROFESSOR OF PHYSIOLOGY, WOMEN'S MEDICAL COLLEGE OF THE NEW YORK INFIRMARY, MEMBER OF AMERICAN NEUROLOGICAL ASSOCIATION, OF NEW YORK NEUROLOGICAL SOCIETY, PHYSICIAN TO CLASS OF NERVOUS DISEASES, NORTHEASTERN DISPENSARY.

As every physician knows, chronic functional nervous disorders of the neurasthenic and hysterical kind are most difficult to treat with success or even satisfaction. They are apt to be set down as "cranks" and nuisances, the victims of a morbid imagination. This is certainly not a correct or charitable view. Hypochondria, hysteria, neurasthenia, "irritable spine," nervousness, are diseases having a somatic basis as truly as has insanity. And it seems somewhat strange that while every one admits the physical basis of mental disease, physicians are reluctant to admit it for these milder, but most distressing and obtrusive disorders.

Before taking up the subject of treatment, permit me to discuss, as briefly as possible, the subject of the nature and proper classification of these neuropathies.

Nomenclature.—As regards nomenclature, every one has doubtless felt dissatisfied with the term neurasthenia, and especially with its ordinary translation (which is an incorrect one) of nervous exhaustion. Neurasthenia means rather nerve-weakness; and, perhaps, a still more explicit and significant translation is nerve-enfeeblement.

We cannot get rid now of the term neurasthenia, however, and it is not desirable; but it is desirable and possible to give it a much more definite meaning than it has yet had.

I believe that we should use the term nerve-weakness or nerve-enfeeblement, as a general one to include all the different functional neuropathies that are characterized by a diminution in the force-generating centres of the nervous system. It should include, therefore, *hysteria*, mild forms of nerve weakness known generally as *nervousness*, more pronounced and localized forms known now as spinal irritation and *neurasthenia proper*, it should include also such disorders as certain forms of *hypochrondriasis*—which the older authors used to look upon with reason as the hysteria of man.

Etiology.—These various neuropathies have certain common methods of development which can be classified as follows:

1. A person inherits or acquires (by overwork, excesses, etc.) a neuropathic diathesis. Some special excess, powerful excitement or injury then induces a train of morbid symptoms characteristic of some form of nerve-weakness.

2. A person of neuropathic antecedents has some slight but chronic local disease (dyspepsia, uterine, ovarian or prostatic irritation, etc.); this, acting as an irritant sets up a train of morbid nervous symptoms. This general disturbance reacts and makes the local trouble worse. The causes thus work in a vicious cycle.

3. Direct, excessive, constant exercise of the nervous centres and mechanisms may lead to an increase of functional irritability with accompanying weakness, or eventually to absolutely less functional activity and power. Continued disuse of previous actively used functions may lead to impairment in their power also, as we see sometimes in persons who have abandoned their special work or business.

All cases of chronic functional nervousness, neurasthenia as usually described, hypochondria, and hysteria will be found, I think, to have an origin in one or more of the foregoing ways.

Fundamental changes, anatomical and chemical, in nerve-weakness.—Modern physiology throws some light upon our conceptions of the essential changes in the various forms of functional nerve-enfeeblement.

Thus we can say with some confidence that underlying these disorders there are the following conditions:

1. An imperfect tissue nutrition and metamorphosis, a kind of tissue-dyspepsia which results in making the nerve-molecules unstable.

2. Coincidently there is often, if not always, some derangement in vascular supply. This vascular change, I venture to say, is always an anæmia or a venous hyperæmia; true hyperæmia is not present, except incidentally and temporarily in chronic functional nerve-weakness, since it is always the correlative of increased functional power.

3. Some permanent chemical changes are very likely present. These changes cannot be great as regards the nerve-elements themselves, for all tissues, as long as they act and preserve their identity, must have about the same composition. I doubt if the balance of the chemist will ever tell us what are functional diseases. But the chemical products of tissue activity may be altered, as shown by the character of the excretions.

Referring now to the disturbance in the tissue nutrition of the nerve-centres, the view that the nerve-molecules are in an unstable condition is, I believe, a helpful one, although it may seem somewhat transcendental.

A nerve-centre may be compared (as was suggested by the late Professor Clifford) to a house of cards which is being constantly built up and as constantly knocked down in every functional act. Normally this house of cards has a certain relative stability and is only toppled over by its legitimate stimuli. But in the neuropathic state the foundations are less broad, the superstructure more frail and less lofty. It is knocked down more easily, it recovers itself more slowly; perhaps it can hardly be built up again at all. It is unstable. With such an illustration we can perhaps refer to "molecular instability" and have it convey a just notion of a real pathological condition.

Physiology of nerve-weakness.—The nerve-centres being in the morbid condition just described, give rise to certain vital phenomena which may be described under the head of the physiology or physiological pathology of nerve-weakness.

These phenomena may be tentatively classified as follows. I would not affirm that the divisions are exact or mutually exclusive:

1. A condition of irritable weakness.
2. A condition of absolute weakness.
3. A condition of lessened resistance to the passage of nerve-impulses.
4. A condition in which the higher and inhibitory centres are weakened in power or entirely "shelved off."

1. The condition of "irritable weakness"—an excellent though ancient term. If you partly cut off the blood-supply from a nerve, then irritate it, the response will be

[1] Read at a meeting of the Practitioners' Society of New York, May 4, 1883.

unusually ready but weaker than normal. The anæmia has increased the nerve-irritability. The nerve prays for blood as Romberg has said. But if you diminish the nutrition of the nerve in any way, it will pray to have its food restored. The prayer comes readily but is short and weak. So it is with nerve-tissue anywhere in the body. Conceive the nervous system to be represented by a tuning-fork with strong, thick blades. When this is struck sharply it responds with a loud and long vibration. If now the blades are worn down till they are very thin, they respond to even a feebler blow, but the response is less vigorous and lasting. So it is with this or that part of the nervous system in functional nerve-enfeeblement.

2. The condition of absolute or almost complete weakness. Here the nervous centres are really exhausted. They respond not only more feebly but less readily, or perhaps not at all. Such a complete exhaustion rarely affects the whole system, but rather certain parts, certain neuro-mechanisms. Sexual impotence illustrates it; while sexual weakness illustrates the preceding phase of irritable weakness.

3. A condition of lessened resistance in the nerve-centres, so that impulses flow over from their natural channels. A slight stimulus causes a dozen reflexes instead of a single one (as we see illustrated in nervous individuals); or a simple sensation awakens a dozen active feelings (as in hysteria); impulses pass up from the viscera or from different parts of the body into consciousness, flowing beyond their natural channels, as in hypochondria; the patient seems to feel some of the functional acts of his intestines or his liver. This condition is necessarily present in over-irritable and unstable centres.

4. A condition in which higher and inhibitory centres are lessened in power. When general enfeeblement attacks the nervous centres it affects those higher and last evolved first. Yet these have important functions in keeping order and harmony among centres below. Reason, judgment, the power of making choice being weakened, the emotions are left more active and less controlled. Such a condition helps to increase the functional disorder in nerve-weakness.

Lest you think this "shelving-off" theory (though, of course, not original with me) a somewhat fantastical one, let me give an illustration to show that we do have controlling centres: Make a cross section of the medulla of a rabbit 3 ctm. above the point of the calamus scriptorius, and the spinal reflexes below will become disorderly and demoralized. Make the section 2 ctm. higher and the spinal reflexes continue normal and orderly; you have not, in the latter case, cut off from the spinal cord its controlling centre. It cannot be doubted that there are similar regulating centres in the human body.

Symptomatology.—The symptoms pertaining to nervousness, neurasthenia, hypochondriasis, hysteria, would fill pages.

In analyzing them, it appears to me very helpful if we look upon the body as a mass of physiological machinery, of which the nerves are the motive and regulating power. For the function of the nervous system is, in a word, to set free and to regulate the energies of the body. Regarding the living body, then, as a compound of many neuro-mechanisms, we can divide them up as follows:

1. Simple and compound muscular neuro-mechanisms.
2. Sensory mechanisms, general and special.
3. Vascular, secretory, and trophic neuro-mechanisms.
4. Neuro-mechanisms of vegetative life.
5. The psychical mechanisms.

It is, I believe, unwise and confusing to attempt to separate, physiologically or even clinically, the disturbances of the sympathetic from those of the cerebro-spinal system. They are anatomically and functionally closely united.

With the above as a basis, we may make the following analysis of the chronic functional disturbances of the nervous system:

1. Irritable or absolute weakness of the simple cranial and spinal muscular neuro-mechanisms: *e.g.*, twitchings.

2. Excessive, perverted or weakened activity of the compound muscular neuro-mechanisms: *e.g.*, contractures, convulsions, paralyses, muscular weakness.

3. Corresponding disturbances of the (*a*) general sensory mechanism: *e.g.*, hyperæsthesia, neuralgia, anæsthesia, spinal irritation; (*b*) of the special sensory mechanism: *e.g.*, disturbances of sight, hearing, etc.

4. Disturbances of the vascular mechanism: flushings, migraine, pupillary disturbance, anæmias and hyperæmias of organs.

5. Disturbances of the secretory and trophic mechanisms.

6. Disturbances of the neuro-mechanisms of vegetative life: *e.g.*, cardiac (palpitations); respiratory (sense of suffocation); gastric (dyspepsia, boulimia); intestinal (constipation, insufficient secretion, dyspepsia); hepatic; sexual.

These mechanisms are for the most part compounds of some of the others, hence their distinct separation is made largely on anatomical grounds.

7. Disturbances of the psychical mechanism: loss of co-ordinative power, inability to concentrate the mind or to use it continuously, morbid fears, emotional disturbances, impaired will-power, etc.

Classification.—It would be very fortunate if we could definitely assign the various forms of nerve-weakness to their proper category. This is not possible, however, since the different forms run into each other, and it is only the most pronounced cases which can be isolated and stamped as being of a particular class and no other. Neurasthenic persons are certainly nervous; hysterical persons often show plain evidences of a general nerve-enfeeblement; hypochondriacs may be also somewhat hysterical.

I venture, however, to lay down some distinctions:

Thus in ordinary *nervousness* there is simply an increased "irritability with weakness" of some or all of the nerve-mechanisms. The sensibilities are more acute, the reflexes more active. There may be some disturbance of the bodily functions, *e.g.*, dyspepsia, palpitations, neuralgias, insomnia. But these are not permanently localized, so that they in turn act reflexly and steadily increase the general trouble.[1]

In that form of disease which has been described by Beard and others as *neurasthenia*, or nerve-enfeeblement proper, we have, in addition to various general nervous symptoms, special and quite permanent disturbances of function. The brain is decidedly enfeebled in some of its functions; the condition is so pronounced that doubtless vascular changes have ensued which react upon the disease to increase it. Or the stomach or sexual organs are crippled in the same manner.

A case is not one of *neurasthenia proper* unless the disease has specially localized itself upon some organ or neuro-mechanism to such extent that the local disturbance is a *locus morbi* reacting upon the general system. The distinction thus made is arbitrary, but a useful one, and I put it forth till a better is presented.

It follows, of course, that *hysteria* is only a neurasthenia. It is, however, markedly separated by the fact that it is much more, in its clinical aspect, a brain disease, a psychopathy, although the spinal cord becomes also involved. I also believe that all the phenomena can be explained on this view. Hysteria is characterized: 1, by the excessive irritability of the nerve-centres, culminating generally in convulsions; 2, by the extreme sensibility of the sexual reflexes; 3, by enfeeblement of the higher psychical powers, the result being excessive activity of the emotions; 4, by a morbid self-concentration upon the bodily sensations. By virtue of

[1] Many persons, especially Americans, are "nervous," but are yet in good health. In these there is an increased irritability or functional activity of the nerve-centres *without the weakness*. They are nervous but have not the disease "nervousness."

her peculiar psychical condition a hysteric is constantly throwing herself into semi-mesmeric states. Hysterical spasms, pains, paralyses, perversions of sense, are very analogous to those produced artificially in healthy persons susceptible of the hypnotic influence.

Hypochondriasis is still more pronouncedly a brain disease, though sometimes only a symptom of a general nerve-enfeeblement. Here we have also some of the features of hysteria—a morbid self-concentration, a morbid susceptibility to visceral impressions. But there is not the exaggerated irritability of hysteria, nor is there so great an enfeeblement of the higher psychical powers.

I present here the provisional classification above indicated:

I. *Nervousness.*—Characteristics: A general irritable weakness of brain, etc., cord, special neuro-mechanisms not seriously and chronically affected so as to react and increase the chronic trouble.

II. *Neurasthenia* (nerve-enfeeblement proper).—Characteristics: 1, irritable weakness of nerve-centres and mechanisms; 2, or absolute weakness; 3, a localization of the disease in various neuro-mechanisms, causing special (gastric, sexual, etc.) forms of neurasthenia, which react to keep up the disease. The phenomena of lessened resistance, of enfeebled controlling centres enter into the disease more or less.

III. *Hysteria* (a neurosis and psychosis combined, but more the latter).—Characteristics: 1, a "shelving-off" of higher controlling powers; 2, greatly increased irritability (with weakness) of lower centres, especially (*a*) emotional, (*b*) spinal reflex, culminating in *convulsions;* 3, localized disturbances of various neuro-mechanisms (motor, cardiac, gastric, sexual, etc.), these disturbances being more acute, more variable, more pronounced than in neurasthenia proper; 4, special irritability of nerve-centres to sexual stimuli.

IV. *Hypochondriasis.*—Characteristics: 1, special sensitiveness (*i.e.*, increased irritability) of emotional and perceptive centres to visceral and sensory impressions (morbid self-concentration); 2, lessened resistance and overflow of visceral and sensory impulses.

The foregoing will I fear seem somewhat recondite. It may be asked: Is there any good in knowing when a hysterical woman comes into your office that her nerve-molecules are in a too explosive condition, and that the top-centres of her brain are functionally sliced off?

It appears wise to try and see as deeply as possible into the intimate nature of disease. Thus some of the practical conclusions from the previous analyses are that over-activity of a nervous system may signify weakness rather than strength; that such over-activity in one part may mean simply that another part is weakened, the check-reins dropped; that true hyperæmia does not characterize the nerve-centres in chronic forms of nervousness, neurasthenia, etc., since it is the correlative of increased functional power.

TREATMENT.

In discussing the subject of treatment I shall refer only to the treatment of the classes which I have described as the nervous, and the neurasthenic proper. It is intended not to go over the whole subject, but having outlined certain general principles to call attention to some special measures with which I have had experience.

General principles.—The points of attack in the treatment of the neuropathies under discussion are: 1, the general condition of health and general nutrition of the body; 2, the nutrition of the nervous system and the neuro-mechanisms specifically; 3, specific medication; 4, the treatment of local sources of irritation, cerebral, spinal, gastric, intestinal, genito-urinary, vascular (this may include surgical measures); 5, mental treatment.

It is an accepted principle in the general treatment of most chronic neuropathic disorders that there should be two periods, one in which sedatives should be employed; in the other stimulants and tonics. A nerve made over-irritable by anæmia, can be quieted by giving a drug which directly lowers the irritability, steadying the unstable molecules; or, by enriching the blood and thus removing the irritant. It is found practically that often the sedatives and tonics can be given together.

Another most important principle in treatment, is the necessity for change of therapeutic method. No drug and no special measure should be kept up continuously. There should be intermissions from all treatment if possible, and the disease should be successively attacked by various remedial agents.

A third important factor is the treatment by measures diverted to the afferent nerves, calling into play the reflex inhibitory and other mechanisms.

I present here the various therapeutic measures to be employed in the treatment of nerve-weakness in its general and localized forms:

Hygiene.—Muscular exercise, massage, Swedish movements, climate-cure, moist and warm localities, sea-voyages, simple removal from ordinary surroundings. Mental hygiene: Amusements, change from ordinary tasks, the discipline of cures and special hospital establishments. Diet: Such as is best digested, slight excess of fats and nitrogenous food.

Internal medication.—Sedatives: Bromides, chloral, paraldehyde, hydrobromic acid, lupulin, camphor, scutellaria, cypripædia, digitalis, stigmata mais, valerian, gelsemium, conium, opium, cannabis indica, asafœtida, hydrocyanic acid, ergot.

Tonics and stimulants: Phosphorus, strychnine, arsenic, zinc musk, œnanthic ether, caffein, thein, coca, salicin, quinine, alcohol. The various aromatic and simple bitters, mineral tonics, iron, act indirectly as tonics. Nitrous oxide.

Surgical Measures.

External Medication.—Tonic: *Electricity*—general electrization, faradic, galvanic, static, special electrization of intestines, urethra, sexual organs, spinal cord, brain. Nerve-vibration.

Hydrotherapy.—Tonic: Cold douches over body or spine, cool to cold baths, plain or medicated; sea or river bathing; acid, aromatic, and sulphurous baths; baths with stimulating friction, and use of oils, aromatics (myrrh, rue, savine, rosemary).

Sedative: Turkish or Russian baths; warm baths, 80° to 95°; hot baths, 95° to 120°.

Revulsives and Inhibitants.—Blisters, seton, sparks of static electricity, hot iron, acupuncture, ignipuncture, aquapuncture; cold (ice-bags); heat. Moxæ.

Regarding the sedatives which may be used in nerve-enfeeblement.

The *bromides* here take the first rank. Every one is familiar with their value. Some statements about them, however, will bear repetition. They should be given generally in larger doses than is ordinarily done, viz. gr. xxx. to gr. xl. or 3 j. The physician should understand that bromization is often the thing needed, not simply giving bromides. Bromization will secure therapeutic results, when simply giving bromides is of no effect at all. A convenient test for bromization is in many cases the production of faucial anæsthesia, so that the finger or a pencil can be thrust into the back of the throat without provoking reflexes. The bromization need not be kept up long, but may need to be repeated. It has seemed to me beneficial to put a patient through a "storm" of bromides just as is done in epilepsy.

Much larger doses of bromide can be taken and the drug can be kept up longer by giving digitalis, or cod-liver oil and iron, or coca at the same time. One patient who was only comfortable when nearly bromidized, felt less depressed while chewing coca leaves. A frail and somewhat anæmic patient of mine takes gr. xl. of bromide three or four times a day with iron, oil, quinine,

and digitalis, and does not seem to suffer seriously from bromide depression.

The most powerful bromide is the lithium salt. But this is expensive and not always obtainable. Bromides are more powerful in combination, and one of the best combinations is, I think, that devised by Dr. Beard, and known as "Bromidi comp." The formula is as follows:

℞. Brom. sodium,
Brom. potass.,
Brom. calc.....āā gr. x.
Brom. lithiæ ..... gr. v.
Iod. potass ..... gr. ijss.
Fowler's solution..... gtt. ij.
Tr. capsici..... gtt. j.
Aqua.....q. s. ad ʒ j.
M. Sig.—One dose.

Acne is to some extent prevented by drinking large quantities of water with each dose and by the addition of Fowler's solution.

If bromide of sodium be dissolved in carbonic acid water, 3 ss. to a tumbler of the water, it makes a mixture very much like Saratoga Geyser, and New York ladies will drink it with much satisfaction. It is an improvement on the bromides with Vichy, as suggested by Dr. E. C. Seguin.

Hydrobromic acid.—For a year and a half I have been using hydrobromic acid quite extensively as a substitute for the bromides.

I find that it is a sedative like the bromides, that it does not produce acne nor constipation, nor does it often disturb the stomach. It may be substituted for the bromides in milder cases, even in treating epilepsy. It is convenient, because it can be given with iron, quinine, and other tonics. The objections to it are that in order to get powerful sedative effects one must give it in disagreeably large doses. The ordinary so-called Fothergill's solution has a strength of three per cent. of the pure acid, and it is altogether too weak to have much sedative effect. The doses which I usually employ are from ♏ xl. to ʒ ij. of the ten per cent. solution. I have given ʒ ij. four times a day without causing any but sedative effects.

With some persons the bromides do not act well. They will even increase irritability and cause insomnia. For these a very efficient sedative is one suggested by Dr. Beard,[1] of which the formula is as follows:

℞. Fluid extract scullcap,
Fluid extract cypripedii,
Fluid extract blue cohosh,
Fluid extract lupulin.....āā ʒ j.
Fluid extract cannab. ind..... ʒ jss.
Sig.—One drachm dose. The cannabis indica can be omitted.

The value of *ergot* is well known. It sometimes increases the sedative action of the bromides, especially when there is venous hyperæmia at the bottom of the trouble. In the insomnia occurring in certain cases of hypochondria, hysteria, and melancholia, and in congestive headaches, it acts when even chloral and bromides fail.

Yet on the whole, ergot has not a very wide range of usefulness in chronic nerve-weakness, and its value, given alone, according to my experience, is not great.

Caffein is not generally considered a sedative, but in the first homœopathic dilution I have known it to relieve an obstinate case of insomnia with bad dreams. In other cases it has failed.

Paraldehyde is a new hypnotic recently introduced by Cervello, and tested in numerous cases by Morselli. It is claimed to be an excellent and safe hypnotic, acting like chloral upon the brain, but rather stimulating the heart. It seems to be a good hypnotic, perhaps not so powerful as chloral, except in disagreeably large doses. In two cases it appeared to have a general sedative and anodyne effect. A nervous, hysterical woman, who had been taking it, said she had not felt so well for a long time. The dose is from ʒ ss. to ʒ ij.

Hyoscyamia is not a very trustworthy drug, and need rarely be resorted to in the nervous troubles of the kind under consideration.

The oleate of aconitia and aconitia internally, but especially the former, are often very useful in relieving some of the neuralgic pains. Nothing special need be said about the other sedatives, chloral, cannabis indica, etc.

Tonics and stimulants.—Of the tonics and stimulants to the general system I have nothing especial to say. One of the best of the bitter tonics is salicin in rather large doses. A formula which is not particularly original is the following:

℞. Acid. hydrobromic. dil., 10% or 3%,
Tinct. ferri muriat.,
Acid. phosphor. dil.....āā ʒ j.
Strychniæ sulph..... gr. ¾
Salicin..... ʒ jss.
Sig.—One drachm t.i.d.

The drugs which especially affect the nutrition of the nervous system are the following:

Arsenic.—In cases where the nervous troubles are kept up by a prostatic or urethral irritation the following formula was used by Dr. Beard:

℞. Liquor potas. arsenit..... ♏ v.
Tinct. cantharid..... ♏ 1/10.
Tinct. hydrastis..... ♏ x.
Tinct. nuc. vomic..... ♏ x.
Tinct. cannabis indica..... ♏ x.
Aquæ.....q. s. ad ʒ j.
Sig.—A teaspoonful.

I have had prepared and used in several cases the liquor brom. arsenic. of Dr. Theo. Clemens, but have not been able to get any good results from it.

Zinc.—This may be given in a formula which includes a number of the zinc salts, as follows:

℞. Zinci bromid.,
Zinci valerianat.,
Zinci lactate.....āā gr. j.
Zinci phosphid..... gr. 1/10.
Extr. belladon.,
Extr. nucis vomic.....āā gr. ½.
Ft. one capsule.

The belladonna and nux vomica may be added or left off in accordance with the indications.

This combination is, I think, more efficacious than the single salt, yet I cannot say that I have used it often enough to speak dogmatically regarding it.

Coca is a very useful medicine if a good quality can only be got. It temporarily brightens up a patient. It is only palliative however. Dr. Beard several times told me that it had greatly disappointed him.

Caffein, in my experience, has not been of much service as a nerve-stimulant.

Damiana I have been disappointed in. Dr. Beard told me he had found it of about as much value as so much water. Possibly samples differ. *Celerma*, in my opinion, is a humbug.

In the treatment of old-standing nervous disorders of the class in question, I have learnt that there is little to be expected from nerve-tonics. Only rarely is our work brightened by a meteoric success apparently due to these medicines alone, except the cases where there is anæmia or chlorosis, and where large doses of iron often act remarkably well.

External medication.—Static electricity has markedly helped cases of hypochondria, hysteria, and general nerve-weakness. It is not so useful, however, as other forms

[1] During the summers of 1881 and 1882 I took charge of Dr. Beard's practice during his absence in Europe. He kindly gave me access to his private formulæ, and described some of his special therapeutic methods. Hence my frequent reference to them now.

of electricity in most cases of nervousness and neurasthenia proper.

General electrisation by the faradic and galvanic currents, it is well known, acts as a tonic to the nervous system and to the general nutrition of the body. My experience is that this electrization ought to be given oftener than is usually done, *e.g.*, every day or even two or three times a day. This is the view also of many German electro-therapeutists. It is known that electricity by improving the nutrition allays irritability and acts as a sedative. But I think it is demonstrated that by the "polar method" and by special electrodes we can undoubtedly get specific sedative effects on the brain and cord at each application.

In cases of unilateral chorea I have in numerous instances applied a large stabile anodal electrode to the scalp over the region of the motor convolutions, the cathode is held in the hand of the opposite and affected side. A current of two to eight Stoehrer's cells has been allowed to pass for about five minutes. In this way I have produced distinct amelioration in the choreic movements lasting for about twenty-four hours.

I have not had an opportunity of using anodal galvanism of the brain alone in cases of mental irritability and weakness, but others have done so, and Althaus especially recommends the measure most enthusiastically.

In some forms of very severe chronic headache, strong anodal galvanization with the foot on the cathode will, I believe, prove beneficial.

I have had made a special electrode by which I can get the anodal effects upon the spinal cord. The spinal electrode is a long narrow sheet of brass, tempered so that its shape can be changed. This is covered with sponge. It is placed over the spine, covering the whole length, and the indifferent electrode held in the patient's hands. Before turning on the current the superficial or skin reflexes of the thorax are tested; then a strong current of twenty-five or thirty cells is passed, and the reflexes tried again. If the irritability of the spinal cord is really reduced by the anode, the reflexes which are purely spinal would be less easily elicited. This has proved to be the case in some cases but not in others.

We have, I think, in electricity, an agent by which direct sedation of the over-irritable nerve-centres can be obtained. In a case of irritable sexual weakness with premature emissions, the patient after a few applications of my spinal electrode was greatly improved, though electricity had been tried before for a long time in vain.

I have here a special appliance for the treatment of sexual nerve-weakness. It was devised by Clemens, of Frankford, and was used upon a most obstinate case of impotence, a case which had been in the hands of many prominent neurologists in New York. The patient rapidly recovered and is now a new man. This which I know to be a fact is my excuse for showing the apparatus, which apparently has a good deal of hocus-pocus about it.

It consists of a zinc cylinder made to enclose the penis, with a funnel attached so that it can be filled with Rhine wine or weak alcohol. The positive pole is connected with it, and the negative pole, which is attached to a very large electrode, is placed over the spine. It is to be used three times a day for five or six minutes, a current of five to eight cells being employed. It is supplemented with a set of magnetic apparatus which seems to be of subsidiary importance. There is no doubt that the patient gets the sedative effects of the galvanic current very thoroughly. I am at present treating a case with it. The patient, who is a very intelligent man, in fact a doctor himself, was very decidedly improved, and is indeed now almost well.

Hydrotherapy.—As *a stimulant and tonic* we administer general cool and cold baths, medicated or otherwise; general tepid baths, gradually making them cooler; local baths of various kinds; cool and cold douches, hot douches or jets, and alternately hot and cold douches or jets; baths with massage or electricity.

Cold baths increase the oxidation of tissue and thereby act as a stimulus to nutrition. They increase the flow of urine. Reflexly they may relieve congestions and inhibit pains. Cold baths act as a tonic to irritably weak nerve-centres by thus relieving congestion, improving nutrition. Cold baths are invaluable to the nervous and neurasthenic when the general system is strong enough to react.

In sexual neurasthenia, with emissions, where the irritability is more prominent than the actual loss of power, cold sitz baths once or twice a day, or cold douches are indicated.

Cold douches to the back are of help to cerebral asthenia, with insomnia, morbid fears, hypochondriasis. Persons who cannot endure cold baths at first can be made to do so by beginning with tepid or cool water, and gradually lowering the temperature. Medicating the baths with salt and alcohol, or aromatics, adds to their effect.

Warm baths.—These also may be local or general. Warm baths relax the blood-vessels, weaken the heart-beat, increase diaphoresis, lessen the amount of urine passed, act sedatively upon the nervous system. The sedation is that of exhaustion, however. Warm baths are to be used temporarily and intermittently, therefore.

I have known warm baths at night to help greatly in relieving insomnia. I have not known much benefit to come from Russian or Turkish baths.

Electrical baths furnish a good way to apply electrization. They are not in high repute among electro-therapeutists. In my very limited experience they have acted well.

Revulsives and inhibitants.—Of these, the cautery applied at the back of the neck and along the spine often gives excellent results in cerebral or sexual nerve-weakness. It stands at the head of counter-irritants.

After the cautery come blisters. Large blisters spread thin or in spots, so that they keep up a slight vesication for a long time, are one of the best forms.

Of the value of acupuncture, ignipuncture, the electric brush or moxa, the seton, I have nothing to say. If there is reason to suspect cerebral or spinal venous hyperæmia, counter-irritants ought to be freely used.

They are often also very potent in arousing dormant or enfeebled centres, or dispelling unpleasant symptoms, acting perhaps by reflex inhibition; I have, therefore, referred to them as "inhibitants."

Dry cups.—A patient of Dr. Beard's, who suffered from a most exaggerated anthrophobia, was treated for some time with little success. He went home finally, and being a mechanic, made himself a kind of air-pump with large cups attached. These he applied upon himself daily and with the result of becoming almost well. Dr. Beard had one of these appliances made and had used it considerably. At the time of his death he had an article prepared giving his results. It had helped a number of cases, but by no means all. A patient of my own—a neurasthenic with hypochondriacal symptoms—dated his steady improvement from a systematic cupping which I gave him.

Massage.—Massage alone does not give much success. It is a luxury in therapeutics. Some neurasthenics cannot endure it. The *masseur*, if experienced, can tell after a few trials whether he can help the patient.

The *Weir-Mitchell treatment* by isolation, rest, massage, electricity, and overfeeding, is oftener applicable to women than men. The majority of male neurasthenics are, I think, not benefited by it, or, at least, will not submit to it. I believe that its good results are chiefly from the psychical effects of a rigid system of eating and living.

Diet.—Dr. Beard, just previous to his death, had been studying the subject of food, and had written a chapter upon the philosophy of diet, based on the principles of evolution. In it he announced the following very original views:

"First, living beings feed on that which is below them in the scale of development.

"Second, the best food for man is that which is just below him or nearest to him in the scale of development.

"Third, food is difficult of assimilation for man in proportion to its distance below man in the scale of development."

The following propositions he also announced as verifiable: "First, the earth feeds on gases; fruits and cereals feed on the earth; the lower animals feed on fruits and cereals, and on other animals; man, therefore, should feed mainly on the lower animals, with a small proportion of fruits and cereals. Second, in proportion as man grows sensitive through civilization or through disease he should diminish the quantity of cereals and fruits and increase the quantity of animal food."

According to this theory and the doctrine of evolution the best food for nervous invalids would be as follows: beef, mutton and lamb, fowl, eggs, milk, fish, butter, wheaten bread.

In discussing the above theory Dr. Beard brings evidence to show that monkeys are good eating, that man is good food for man, and that cannibals are the strongest and healthiest of savages!

Without discussing this subject now, it has been generally admitted that a nitrogenous diet is best for those of unstable nervous energy. We can explain this from the fact that nitrogenous food has more to do with structure and nutrition, non-nitrogenous with function, or discharge of energy. In the nervous we want a food that will give more stability to cell and axis-cylinder, and not a food which feeds the function and really increases instability. To return to an old simile, the nervous system may be compared to a delicately vibrating rod fastened at one end. Normally, vibrations take place without waste of the metal of the rod, or of the tissue of the nerve. In the case of this latter, however, over-vibration, too persistent vibration, and other causes finally wear away its textures. It becomes, so to speak, thinner, weaker, yet it vibrates more readily and delicately, just as does the rod when made thin.

The object of radical curative treatment is to make the nerve more, so to speak, solid. Nitrogenous food supplies tissue to the wasted nerve, and thus helps to do this. Fatty food is also essential, because fat also is a constituent of nerve-tissue, and a help to nerve-action.

I believe, however, that too much stress may be put upon special diets, and that after all a mixed diet of thoroughly digestible and palatable food is often quite as good as a special diet, unless some special gastric or intestinal trouble be present. The nervous system is not the only thing that has to be dieted.

Mental therapeutics.—I am profoundly convinced of the prominent place of mental influence in the therapeutics of functional nervous diseases. "The most powerful single remedy that can be used in the treatment of neurasthenia is the mind," was an aphorism of the late Dr. Beard, and all experience acknowledges its truth. Witness the success of faith-cures. I have seen a hypnotic fall very nearly lifeless when told to shoot himself with a stick which he thought was a loaded pistol. This mental therapeutics is the mainstay of charlatanry and the backbone of many a genuine professional success. Some persons are spoken of as born physicians, and I conceive it is because they have the tact and skill to manipulate the *psyche* of their patients. Such skill is particularly needed in treating chronic functional troubles. "It is not everybody," says Holmes, in describing Dr. Kittridge, "that enters into the soul of Mozart's or Beethoven's harmonies; and there are vital symphonies in B flat and other low, sad keys which a doctor may know as little of as a hurdy-gurdy player of the essence of those divine musical mysteries." One must get a mental grip upon the patient, and if the patient is intractable he had better have a change of environment.

It will not do in treating the undervitalized neurotic to scoff at his troubles, or to try and "bulldoze" his symptoms. He must be persuaded that you understand his case, appreciate the reality of his suffering, and made to feel that you can help and perhaps cure him.

The application of remedies must be made also, so that some psychical stimulus, if possible, shall be mingled with their administration. It is not an easy thing to touch the stops and strings of an enfeebled nervous system so as finally to evoke harmonies. He who succeeds is more than a specialist, he is a true physician.

DISTURBANCES OF THE SEXUAL ORGANS IN THEIR RELATION TO AFFECTIONS OF THE EYE.[1]

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It has been said that every specialist exaggerates the importance of the diseases coming under his own observation and treatment. Doubtless many reasons could be advanced why this should be true. To one who had not thought over the subject of this paper, or had had little experience with the disturbances of which it treats, it could well seem rather far-fetched to trace connection between the sexual and the visual apparatus or their affections. I hope, however, to convince any skeptic on the subject that there is more than simple coincidence in the occurrence of such, and I expect to show that almost every tissue of the eye is at times subject to change produced by certain conditions of the sexual organs; from the superficial and transient coloring of the skin of the eyelids during the menstrual period of many women, to disturbances of circulation in the retina and optic nerve of so serious a nature as to produce complete blindness. The study of the subject is connected with some difficulty, and this will explain the limited literature of the subject, as compared with its importance. Patients' statements (always to be taken *cum grano*) are particularly unreliable in this class of cases. It is not easy, and far from pleasant, to ask a girl, or woman, who comes for trouble of the eyes, about the condition of her sexual organs. Even with men the seeker after truths of this description is apt to be treated as inquisitive. The patient cannot see the use of the inquiry, and is apt to avoid a doctor who asks such irrelevant questions. In all disorders of the sexual system women are much oftener sufferers than men. The functions of menstruation, gestation, and lactation in the normal, healthy woman are of such magnitude and importance in her life, as compared with the sexual functions of the man, that naturally, due to the normal and abnormal, physiological and pathological changes in these functions and organs, the female sex furnishes a much larger number of the cases to be treated of here than the male. In the statistics prepared by Dr. Ludowigs[2] there were, out of 5,507 eye patients treated at Dr. Mooren's clinic in Düsseldorf, in 1880, of spontaneous troubles of the eye coming on after the years of puberty, 67½ per cent. women to 32½ per cent. men. There were naturally excluded from this calculation all cases of traumatism, of which men were the most frequent victims, and also all syphilitic affections. This percentage, however, is general. In certain affections of the eye there is a much greater preponderance of women. Of Basedow's disease there were 2 women to 0 men; episcleritis, 9 to 2; deep keratitis, 20 to 5; punctate keratitis and iritis serosa, 7 to 0; myodesopsia, 21 to 8; vitreous opacities, 12 to 4; hyperæmia of nerve or retina, with hyperæmia of the meninges or irregular menses, 36 to 7; amblyopia and metrorrhagia, 5 to 0; asthenopia from anæmia, 40 to 5.

By these figures we see women in the proportion of from two to eight to one man. Eye affections can be produced either by reflex, nervous irritation, started in some

[1] Read before the East River Medical Association, May 9, 1883.

[2] Arch. of Ophthal, vol. xi., No. 3.

part of the sexual organism, or by changes in the circulation; or by both in the same individual. Irritation of certain kinds in one part of the nervous system can produce reflex disturbances of various kinds in the most distant part of the organism. Given an irritation of an afferent nerve, no one can tell where the reflex symptoms shall show themselves. A man steps onto a rusty nail, which produces the slightest punctured wound of the foot. In consequence of this injury he shall have tonic contractions of his risorius, masseter, and temporal muscles, and clonic spasms of different muscles of the trunk and limbs, joined to such exquisite hyperæsthesia of nerves of ordinary and special sensibility that a draught or a noise shall bring on a convulsion. This picture is familiar enough to us under the name of tetanus, and prepares us a little more for this statement: From irritation of the genital apparatus you can have spasm of the orbicularis muscle (blepharospasm), spasm or paresis of almost any muscle of the eye proper, affections of the conjunctiva, of the cornea, of the sclera, of the iris (mydriasis), of the ciliary muscle, of the choroid and vitreous, of the retina, of the optic nerve, and of the brain. Of this last, however, I mean to speak only incidentally, as it may be necessary to illustrate my subject. Of changes in the circulation I will speak later.

Spasm of the orbicularis muscle (blepharospasm) has been attributed of late, by most authors, to reflex origin. As early as 1810 Fautrel (Sedillot's *Journal Gen. de Med.*) notices spasm of the lids so often accompanying chorea. He claims that all his choraic patients were onanists. Wendt (in his book on "Kinderkrankheiten," 1835) holds the same opinion. Michael (*Graefe-Saemisch*, vol. iv.), speaking of the etiology of these clonic spasms, says: "Increased predisposition is created by excesses in venere et Baccho, strong excitement." Ziemssen[1] thinks the statements of these patients too unreliable to found a positive opinion as to the cause of chorea thereon. Hermann Cohen (*Archives of Ophthal.*, vol. xi., No. 4) says: "I find so frequently the note in my journal, 'Confesses excessive onanism,' in cases of chronic blepharospasm (9–12 per 1,000 in 30,000 patients) that I cannot deny the probability of the connection between the spasms and onanism." There are cases on record in which the spasm occurred only when the patient attempted to speak and was spoken to.

Diseases of the conjunctiva, usually of a most stubborn kind, are not uncommon from these causes. Förster (*Graefe-Saemisch*, vol. vii.) mentions having seen a number of such in confessed onanists, from twelve to twenty years of age. They were mainly catarrhal and trachomatous inflammations with persistent hyperæmia. In this connection he calls attention to the intractable cases of pharyngeal catarrh, so often met in patients with spermatorrhœa.

H. Cohen (loc. cit.) gives six such cases, one of which had been treated for five years by himself and others with applications of copper sulphate and other astringents. Two of these patients were commercial travellers, who noticed in the morning, after having committed sexual excesses, great redness of the margin of the lids and of the conjunctiva. I have myself seen two similar cases in young men about town. I thought, however, that in their cases the loss of sleep and consumption of champagne was sufficient to explain the conjunctivitis.

Inflammations of the cornea are very much influenced by changes in the sexual organs. Parenchymatous keratitis shows itself more frequently at puberty than at any other period of life. Mooren[2] relates the case of a woman, twenty-eight years of age, who had never menstruated. She had a parenchymatous keratitis since she was fifteen years of age, much aggravated every four weeks. By strong emmenagogues an insignificant menstruation was induced a few times in succession, and "she was freed of her pain and photophobia as if by magic." I can recall the case of a French-Canadian girl, twenty years of age, under my care at the New York Eye Infirmary during my resident surgeonship there, who had a keratitis and still showed extensive posterior synechiæ (I believe she was in Dr. Derby's division). She had violent exacerbations of her trouble at each period. I had overlooked the cause at the first exacerbation, but had my attention called to it by the nurse, who saw me puzzling over it. I may say that I observed this connection closely afterward, and in order to economize time and avoid tiring you with details I can give it as my experience that there is hardly any disease of the eye, or a wound after any operation in menstruating women which I have not seen influenced, more or less, during the monthly flow; or rather just before the beginning of the flow. I have seen wounds take on such alarming inflammatory action during this period that I am very careful now to ascertain the time when this is expected before operating. I would not operate for cataract at such a time as to have the catamenia appear during the healing process; unless there were some special reason for urgency.

Mooren[1] tells the case of a woman, forty-five years of age, who had a retroflexion with a tumor of the cervix uteri. When she began being treated for this her right eye became affected with an episcleritis. Every touch of the cervix and every insertion of a pessary aggravated the episcleritis. This was cured and remained so for a year. Then fresh uterine trouble brought on an episcleritis in the *left* eye, which grew worse on each local application to the uterus. I have observed a vigorous German woman, of about the same age, who had a mimic spasm of the right side of her face for years. This was complicated at times by trifacial neuralgia and a sclero-keratitis of the same side. This woman volunteered to me the statement that she had noticed severe exacerbations of the pain and eye trouble during her periods. (I presented her at that time to the Ophthalmological Society.) When I lost sight of her her spasms and eye trouble had been relieved very much, but not completely, by antirheumatic remedies and massage.

The iris is never, so far as I know, inflamed by reflex irritation. In septic or puerperal metastatic attacks, however, it is usually implicated in the purulent inflammation; which has, as a rule, its beginning in the ureal tract and extends commonly to every tissue of the eyeball and even to the cellular tissue of the orbit. There are cases, however, of such irritation in which the muscular structure of the iris is affected, either by paresis or spasm. I refer to the cases on record of mydriasis (dilatation of the pupil) which is due either to irritation of the sympathetic nerve, or to paresis of the twig supplying the iris from the oculomotorius. These cases may be uni- or bilateral. Parametritis, of which I shall speak later if the time permit, endometritis, retroflexion, and hyperæsthesia with scanty menstruation are among the causes given. While interne in Charity Hospital I treated a young woman for granular vaginitis. The pupil of her left eye dilated at times without evident cause. She had no trace of brain trouble, goitre, or aneurism, for which I examined her carefully.

Her vision was not affected at the time. I examined the eye by the ophthalmoscope; but I do not think that my experience with the instrument was sufficient *then* to make my opinion reliable. I *thought* the fundus was normal. The connection between the vaginitis and the mydriasis did not occur to me at that time. Mooren[2] saw one case of myosis (contraction of the pupil) in a woman, sixty-eight years of age, whose uterus had been prolapsed for years, without paralysis of the legs or bladder. She had also a slight atrophy of the optic nerve.

The ciliary muscle may be partially or completely paralyzed by irritation of the genital organs. Miss N——,[3] twenty-four years of age, practised onanism since she was

[1] Handbuch, vol. xii., 2. [2] Arch. of Ophthal., vol. xi., No. 3.

[1] Ibid. [2] Loc. cit. [3] From Mooren, loc. cit.

fifteen years of age. Her power of accommodation has decreased from year to year. Her labia minora were unusually large, her clitoris was prominent and so excitable that amputation was advised.

A South American woman who had masturbated since her early youth had complete loss of accommodation. In both of these cases the genitals were so excitable as to give rise to great dyspnœa at times. A single woman, thirty years of age, had the same symptoms produced by intense irritation of the mucous membrane of the vulva from acne pustules and the constant scratching provoked by them. Pregnancy and lactation are held by several authors to be the cause of accommodative asthenopia. Hutchison ("Oph. Hosp. Rep.," vol. vii.) thinks it not infrequent.

The vitreous humor is usually affected in connection with diseases of the choroid or retina, so I shall speak of it only in connection with these tissues.

Hyperæsthesia of the retina has been observed very often in cases of parametritis. In the three cases just mentioned with deficient accommodative power this hyperæsthesia was very marked. The South American woman could hardly bear the lustre of the eyes of other persons. A fourth, a French woman, could hardly enter an illuminated room. After the cauterization of one of these sensitive, papillary swellings she had at the mouth of her urethra, and the use of bromide for some time, her eye troubles disappeared. In another woman a rupture of the perineum and descent of the uterus seems to have been the cause of hyperæsthesia and *spasm* of accommodation. She had four children, and the birth of each seems to have aggravated the condition of the perineum and eyes. A girl, twenty-one years of age, with infantile uterus was a victim of this same trouble. Mooren says [1] it is most often met with in congenital stenosis of the orifice of the uterus and can be caused by inflammation producing alteration in the shape or dimensions in any part of the genital tract.

From retinal hyperæsthesia we come naturally to *photopsia*, which may be, at times, only an increase of the same irritation. H. Cohen [2] records seven cases, four men and three girls, addicted to onanism. All were between the ages of fifteen and thirty-one. Each one of these gave a history of subjective perceptions of light, such as the sensation of dazzling by some bright moving figure, as a window, for instance, or bright rings, or dots, or stars, or snowflakes. In all these cases the eyes were in other respects normal, all having V=1, or over. In all but two both eyes were affected, and the dazzling vanished when the eyes were closed. Most of them complained of neurasthenia, insomnia, and pollutions.

Strictly speaking this need not necessarily be a retinal trouble. An irritation of any part of the fibres of the optic nerve will produce these subjective symptoms. This point of irritation may be anywhere from their peripheral expansion in the retina, along the optic tracts, the ganglia, the cortex of the occipital lobe, the cerebellum, or the olivary body in the medulla, to all of which points fibres have been traced by recent investigators. Therefore, unless other symptoms (herdsymptome) will indicate it, it is always impossible to say exactly where the point of irritation exists. I will not mention here retinitis as due to pregnancy, because usually albuminuria exists in these cases. We are certain, however, that pregnancy predisposes to both these troubles and I have no doubt every one present has seen them.

Two very interesting cases of retinal detachment (Mooren) will end my remarks on retinal troubles. In the first, a few years after marriage the introduction of a speculum, for the removal of some prominent Nabothian follicles, produced violent pain in the back and legs and obscuration of sight. Later, injections of warm salt-water produced inability to move the legs, ice-cold extremities from the hip down, objectively as well as subjectively, while the upper part of the body was very hot. She was often absolutely blind for a few minutes at a time. A large detachment of the retina was observed, and seemed to be the result. The patient had, however, before this time sclerochoroiditis posterior in one eye and exudation in the other choroid. The second patient, unmarried, had always had scanty and painful menstruation. General health good. In her right eye she had an anæsthetic retina with reduced vision and field, and a rosy injection around the papilla. The left eye showed atrophy of the optic nerve and partial detachment of the retina.

In the choroid we have a condition of chronic inflammation, which seems to be caused by uterine disorders. This has been denied. I have now under observation a dispensary patient with this choroidal picture, who has a chronic metritis. I can find no other apparent cause for her choroiditis. A second patient, a lady at the climacteric, who is myopic ½, has aggravated choroiditis and vitreous opacities since her molimina began to be irregular.

Now as regards *the optic nerve*, we have on record all grades of changes which seem to be produced, either by reflex irritation, or vascular changes in the uterus or ovaries. These can show themselves functionally in all degrees, from the slight narrowing of the field, or the least reduction of vision or color sense by weak illuminations, to the fulminating attacks of blindness by the sudden cessation of the menses, or a phlebitis of the central retinal vein.

Samelsohn (*Berl. Klin. Wochenschrift*, 1875) tells of a woman, twenty-one years of age, whose standing in the water with bare feet caused a sudden menostasis. She complained of an unpleasant pressure behind the eyes the same evening. Within the month she was completely blind. Samelsohn thinks it was a transudation into the orbit compressing the optic nerve. The ophthalmoscope showed engorged veins. The woman's sight returned in a week. Congestion of the optic nerve in cases of chronic uterine trouble has been observed very often. These may terminate in recovery, or atrophy of the nerve.

Since Rokitansky has made his contribution to the study of chronic congestion, it is easy to understand how a chronic hyperæmia can cause an atrophy. He describes a condition which he insists is the result of hyperæmia and not of inflammation. It is a deposit of new, gelatinous, connective tissue; which in time becomes fibrillated, then contracts, and becomes cicatricial, destroying the nerve-tissue in the course of this contraction. This process he has observed in the brain and in the spinal, olfactory, and optic nerves. If, as we have seen, the physiological flux can produce such changes in a woman's eye, it must follow that any of the chronic engorgements of the pelvic tissues and sinuses is certainly capable of producing a chronic congestion of the optic nerve. Displacement and flexions of the uterus, chronic engorgement of this organ, and the extensive venous network filling the pelvis, from inflammations or what not, can thus become causes of eye-troubles. Let us look for a moment at the venous connection between the parts. We have the spinal veins, carrying four longitudinal columns of blood the whole length of the spinal canal, from the foramen magnum to the coccyx. These veins ramify and communicate in all directions. *They have no valves.* They connect with the uterine and pampiniform plexuses and the ovarian veins through the lumbar and sacral veins. At its upper end this column of blood is joined to the vertebral and inferior cerebellar veins, and the occipital and petrosal sinuses.

Thus we see that the cerebral, the spinal, and the pelvic venous system of a woman is practically continuous. Hence, we have the almost universal backaches and headaches in woman, with the most trifling menstrual disorders, and, in fact, in those whose catamenia are nor-

[1] Loc. cit.

[2] Loc. cit.

mal, as far as we can tell. We know that both the origin and the course of the optic-nerve is in great part superficial, and therefore easily accessible to disturbances from irregular circulation in the meninges. Many facts of the clinical picture have been given, although necessarily short and imperfectly.

Lastly, I desire to call your attention for a moment to the fact that Graves' disease (exophthalmic goitre) has been considered by some authorities as having its origin through reflex action in disturbances of the sexual system.

We know that women are much more subject to the disorder than men: Emmert counts one man in ten, Von Graefe makes it one in seven, Mooren one in thirteen, Geigel one in seven, Von Dusch about one in five (11 in 57.5).[1]

The only writer who has these proportions reversed, so far as I have looked, is Chvostek, an Austrian army surgeon. He naturally saw more men than women. If I make a grand average of all these it gives us about one man to eight women. Laycock calls attention to the fact that old women (after the menopause) never have Basedow's disease. Other arguments are that frequently the thyroid gland enlarges in girls at the time of puberty. H. Cohen (loc. cit.) has recorded one such case in which a regularly recurring exophthalmos during the menstrual period was verified by measurements.

These facts warrant us in concluding that Basedow's disease is influenced by sex and some changes and disturbances of the sexual organs. Freund, who has made an exhaustive study of some of these diseases states that in the last ten or twelve years he has not examined a single case of morbus Basedowi in women without finding a parametritis in the contracting stage. Förster (loc. cit.) gives an account of one case which seems to show that the female sex does not exclusively show this disease in consequence of sexual excitement. The case is so extraordinary a one that I thought it would be interesting to give it here translated in full. "In July, 1866, I saw a clerk, twenty-four years of age, with exquisite morbus Basedowi. Pulse 120, strong cardiac impulse, moderate swelling of the thyroid gland, with pulsation in it, and considerable protrusion of both eyeballs. The last symptoms brought him to me. The symptoms dated back three weeks, and appeared suddenly. He gave the following history: 'About the middle of June he struggled for about half an hour with a girl in the effort to have connection; but her energetic resistance prevented the consummation. He so overexerted himself with this effort that he finally felt very faint and had to take several glasses of Madeira to restore him partially. The violent heart action which began during the struggle has continued since. Two days later he first noticed the prominence of his eyes, which has steadily increased since then.' Both epididymes were painful and swollen. Professor Freund, who also examined the patient, corroborates this. Quinine, in large doses, was ordered and moderation in the exercise of the sexual function advised. The patient departed and presented himself again nine months later. He stated that the exophthalmos and violent heart action had gradually subsided after taking about 9.00 of quinine. However, in October (four months after the first appearance), the former, and in December (six months), the latter symptom had begun to show itself again. I found in April, 1867, essentially the same condition as in July, the exophthalmos even increased. The patient looked well, felt strong, and had retained a good appetite. No sign of anæmia had developed. The inquiry into his sexual behavior was evidently disagreeable to him. He went off and I have not seen him again."

Finally, gentlemen, I should have liked to say something about a most troublesome class of cases, which are the terror of ophthalmologists. If I were to undertake to tell you a tenth of all the symptoms of which they complain, I should have to detain you too long. The most careful examination rarely shows objective basis for the violence of the symptoms complained of. Photophobia, pain on using the eyes, pains in various parts of the eyes and orbit, changing in character, but always of the most hyperbolical severity, inability to wear their glasses, etc., are at the bottom of the long tale of woe. These pains are never so severe as to prevent attendance at the theatre or ball and rarely intrude themselves when there is pleasant company in the house. The name of the disorder is kopiopia hysterica. For fear it should prejudice you against the female sex I will read you a case from Förster (loc. cit.) in your own sex. "A married man, thirty-seven years of age, with a long list of the most pronounced symptoms and no lesion to explain them, admitted that his sexual capacity had very much decreased. Coitus barely once a month, never a firm erection, immissio penis always problematical, ejaculation usually took place without it. The man had strikingly small testes and a thin, milky discharge from the urethra." Förster says that this case is not single, only that the patients' statements are usually unreliable on the subject. He suggests that one obtains more reliable data from their wives, who seem more carefully to note the difference between the past and the present. Kopiopia hysterica in women is almost always connected with a lesion in the pelvis; which Prof. Freund, who first noticed it, and who gives a most interesting clinical and pathological picture of it in his publications, calls "parametritis chronica atrophicans." I can do no better than to close with a quotation from Mooren: "According to my own experience," says he, "I would say that of all the eye affections of choroid, retina, optic nerve, etc., there are none which are not influenced either by the normal or pathological workings of the uterus."

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[1] Sattler in Graefe-Saemsch, vol. vi;

AN ERYTHEMATOUS ERUPTION FROM CHLORATE OF POTASSIUM.

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The subject of "medicinal eruptions" has received considerable attention during the past few years, and at the hands of several writers has been exhaustively presented.[1] The excuse, therefore, of reporting fresh examples must lie either in the fact that the observation is one respecting a drug heretofore unsuspected, or that the eruption is characterized by unusual features. So far as I can ascertain, the chlorate of potassium has not been recorded as capable of causing cutaneous disturbance, and the former reason, therefore, is answerable for this communication. The patient—a male—in whom the eruption was observed was suffering from secondary syphilis, and had been under treatment for several months. The symptoms of the disease were of a mild type, and treatment had consisted in the administration of small doses of the corrosive chloride of mercury. About this time a few mucous patches showed themselves in the mouth. The stick of nitrate of silver was used, and tablets of potassium chlorate ordered, several daily; these were to be allowed to dissolve in the mouth slowly. Four days later the gentleman returned, much annoyed and worried concerning a fiery erythematous and papular eruption, which had made its appearance over the trunk and neck, especially well marked on the upper part of the back. There were no subjective symptoms. The eruption was similar in character to that of erythema multiforme, and of this nature I was inclined to

[1] Behrend: Zur Allg. Diagnostik der Arznei Ausschläge; Berlin. klin. Wochs., p. 714, vol. xvi., 1879. Morrow: On Drug Exanthemata; N. Y. Med. Jour., p. 224, vol. xxxi., 1880. Van Harlingen: Medicinal Eruptions; Arch. Derm., p. 337, October, 1880.

consider it. The possibility of its being due to the mercury was entertained, but as this had been taken off and on for several months without any such result before, and as, moreover, the dose had been very small, the idea was dismissed. At this time, the potassium chlorate, as a cause, was not even considered. Treatment with the mercury was continued. The tablets had all been used, and as the mucous patches had disappeared they were not renewed. In two days the eruption was gone. Six weeks later several mucous patches were again seen. These were cauterized and attention called to renewing the tablets. Three days afterward the patient returned with an eruption the same in character as before; the trunk and neck were involved, and several slightly raised erythematous spots were seen on the legs. The chlorate was immediately suspected, and its discontinuance ordered. In less than forty-eight hours the eruption had subsided. Since this outbreak the patient has, at my solicitation, twice used the tablets for a few days, and at both times its action on the skin followed. The tablets consisted of five grains each, and it required but fifteen to twenty to call forth the eruption. A similar rash has been recorded as occasionally following the use of mercury. The case here mentioned has suggested the idea that, in some of these instances, the eruption may have been due to the chlorate of potassium; as is well known, this is frequently employed to modify or lessen the action of the mercury on the mouth, and also for the purpose of influencing mucous patches. At all events, this possible action of the chlorate, as related in the above case, is well worth bearing in mind.

SURGICAL FRACTURE OF THE FEMUR.

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A SHORT time after the close of the late civil war the Surgeon-General of the United States army directed to be made to him army surgical reports of cases that might be of sufficient importance to incorporate into the "Medical and Surgical History of the War of the Rebellion." Of the number of cases I reported, whether from some oversight or of a disapproval of the surgical treatment of the case, my report of a surgical fracture of the femur did not make its appearance in the work among the operations of the lower extremities.

As the case was one of a formidable nature, and attracted at the time the attention of surgeons of both armies, I deem it of sufficient interest to place it on record, even at this late day.

In 1862–3, when in winter quarters at Buckhannon, W. Va., some of the surgeons of the brigade directed my attention to a Sergeant P——, of the First Virginia Infantry, who was shot with a musket-ball, through both thighs, fracturing the right femur, a little below the lesser trochanter, the ball being lost in the same limb. The case was generally considered as a suitable one for amputation at the hip-joint. As I had performed that operation a few years previously in civil practice, the patient was advised to place himself under my care. Following this advice he sent for me, requesting my services. Although he was confined at his home, about fifteen miles outside of our lines, from the general interest that was felt in the case I concluded to run the risk to reach him and perform the operation. It was strictly a volunteer duty, as the patient was never officially assigned to me.

By the aid of a guide I reached my patient in safety. I was there met by a neighborhood physician. I found the patient in bed, much emaciated, with the right thigh enormously distended and here and there perforated with fistulous openings. The ball passed through the left upper thigh (inflicting a wound that had healed up when I saw him) and penetrated the right thigh at Scarpa's triangle and fractured the femur.

He was wounded in a skirmish with the enemy, nine months before the time I saw him. He fell into their hands and was examined by quite a number of their surgeons, but from the unfavorable prognosis of the case, no operation was attempted. His friends finally got permission to take him home, and to do so he was carried one hundred miles on stretchers. Not long afterward he was taken to a United States hospital at Wheeling, Va. Here, according to the patient's statement, he was examined by more than fifty visiting surgeons, and they, like their Confederate *confrères*, deemed it best not to operate on him, and under unfavorable prognosis he was held under a strictly surgical conservation. He gradually got weaker, as the suppuration and inflammation extended itself in the leg, and was finally permitted to return to his home.

Taking into consideration the condition of the patient I concluded not to amputate, but to enter into a dissection in search of the ball. By a careful palpation, I detected an ill-defined fluctuation, anterior to the upper third of the thigh. It took in a space nearly the size of my hand. The patient was placed under the influence of chloroform. I made here an incision in line with the femur into the deep fasciæ, and entered a large abscess. I carefully removed its contents, which was about a pint of sanious pus and a few spiculæ of bones that had exfoliated from the main bone. With my fingers I carefully explored the parts in search of the ball, and finally passed my finger into a sinus that terminated on the outside of the femur, where I detected by the touch a sharp projection of the ball. From the lower end of the longitudinal incision I made a transverse incision to the right, about six inches long. This gave me ample room to reach the ball and the necrosed bones. These incisions had necessarily to be extensive to correspond with the morbid enlargement of the limb. I applied bullet-forceps to the ball and made firm traction for its extirpation. But it was so firmly imbedded in ossification that I could not move it in the least. Persisting in my efforts to get it out, I broke and bent two bullet-forceps in the attempt, which were all the instruments of the kind I had with me. Here a painful crisis presented itself. There was but one question at issue, and that was that the ball and all foreign material in the limb had to come out and, owing to the condition of the patient, very quickly too.

To meet this terrible emergency I placed my left knee as a fulcrum under the hip-joint, or rather somewhat a little in advance of it, and struck the knee of the affected limb a sharp, firm blow, causing a fracture of the bone at the place where the ball was imbedded. This surgical fracture was easily effected at the proper place, owing to the presence of the ball and necrosed bones. I was now able to pick out with my fingers the ball, which was in two pieces, very much flattened out, and with the same facility removed all necrosed bones. I cleansed with care the entire wound with tepid water, and closed it up as the patient emerged from the influence of the chloroform, thus giving him more or less pain to favor reaction. Drainage from the cavity of the abscess was established, and to the outside of the wound I applied light compresses saturated with a weak solution of Labarraque's disinfecting liquid. The shock that followed the operation gave us much anxiety. For many weeks he was in a most critical condition, but being kept under a stimulating and sustaining treatment, finally convalescence was established, though long and tedious.

The cure terminated with considerable shortening of the limb, as might be expected, both from the original gun-shot fracture and the subsequent surgical fracture that was treated by position and not by splints. As I left the patient in an extremely exhausted condition, barely alive, so to speak, I advised the attending physician not to resort to splints, but to maintain the limb in the best and easiest position he could with the least tax to the patient. It was the life of the patient we struggled to save, and not the limb at the risk of life.

Progress of Medical Science.

THE INFLUENCE OF THE ELECTRIC LIGHT ON THE HUMAN EYE.—In discussing the value of any particular source of artificial light, says Professor Mauthner (*Wien. Allgem. Med. Zeit.*, No. 10, 1883), three qualities should be especially regarded: 1, the steadiness of the light; 2, the strength of the light; 3, its composition. From its complete failure in point of steadiness, the arc-light must be at once rejected from the category of lights suitable for the human eye. The incandescent lamp, on the other hand, deserves a prominent position. As regards its strength or intensity, it also fulfils all requirements, since it can be modified or intensified at will. The composition of the lights habitually used hitherto has shown a preponderance of yellow rays. In the electric light, however, the short-wave rays predominate—*i.e.*, the violet rays. To the human retina, blue or violet tints are more agreeable than yellow, and hence from its composition, as well as from its steadiness and adaptability, the light of the incandescent lamp is especially adapted for the use of the human eye. Distinctness of vision and the perception of color are both increased under the electric light—facts which might be theoretically held to involve an overstrained retina. Such a theory is not, however, borne out by practical experience; it is only where the light employed is unsteady that any ill effects have been observed. It may be considered as an established axiom, that the brilliancy and composition of any light are as nothing, in respect of its value as an illuminating medium for ordinary uses, compared with its constancy and steadiness. In the incandescent lamp no combustion takes place, and hence no consumption or vitiation of atmospheric air is induced. From a theoretic point of view, therefore, no objection can be raised against the use of the incandescent electric lamp. Its full value as an illuminator is, however, not yet ascertained.

ABDOMINAL INUNCTION DURING PREGNANCY.—Dr. Burke, in the *New England Med. Monthly*, says: "In the last three or four months of pregnancy all women suffer discomfort from the distention of the abdominal walls, which I have found greatly relieved by the free use, at least once a day, of some unctuous material, as vaseline or sweet lard, and in many cases the formation of the lineæ albicantes is prevented."

THE SECRETIONS IN MORPHIA POISONING. — Dr. Marmé, of Göttingen, communicates (*Deutsche Med. Wochensch.*, April 4th) a paper on his investigations of the urine and other excretions in morphia poisoning, undertaken partly on patients, partly on animals. He finds that morphia can be recovered unaltered from the urine when the amount taken is not less than one-seventh grain daily. When larger doses are taken, it is found also in the fæces. Instead of morphia, Dr. Marmé sometimes found "oxydimorphin" in the excretions and in the tissues, and he found by experiment that this substance was present when a poisonous dose had been administered in very small quantities at a time, and the symptoms resembled those of the abstinence stage of morphia intoxication. From his experiments Dr. Marmé has formed the opinion that morphia may be left off suddenly in very strong well-nourished individuals, but that in weakly persons it is necessary to diminish the dose gradually.

EXTIRPATION OF THE LARYNX.—Dr. Müller reports upon this subject in the *Gaz. Méd. de Strasbourg*. In April, 1881, extirpation of the larynx was performed by Professor von Winiwarter for an adeno-carcinoma of the larynx, with diffused epithelial infiltration. There was no return eleven months after the operation. The patient did not use her artificial larynx, finding that deglutition was impeded thereby. She wore a fenestrated tracheal canula, communicating by the opening with the pharynx and provided with a mouth at its external orifice. She breathed quite freely and could swallow both liquids and solids with ease. Articulation was almost without sound, but was sufficiently distinct for her to be heard and understood. Of the forty-three cases of extirpation of the larynx hitherto published, thirty-two have been undertaken for carcinomatous, six for sarcomatous growths, and two for tertiary syphilis. Of the six performed for the removal of sarcomata in only one has the growth returned, the other patients up to this time having remained free six years, two years, seventeen, fifteen, six, and four months respectively. In the removal of carcinomata the prognosis is less favorable; of the thirty-two cases published, there are only two in which the patient has remained free eleven months, the frequency and rapidity of the return being almost always due to the great extent of the lesion and invasion of the neighboring parts. The mortality, moreover, is much influenced by septic pneumonia, this having been the cause of death of nearly all the patients who have succumbed in the course of the first few days after the operation. To avoid the entrance of foreign bodies into the air-passages, Dr. von Winiwarter brings the anterior wall of the œsophagus over and in front of the trachea, and fixes it with sutures to the cutaneous wound. To avoid septic pneumonia, the parts are dressed with iodoform and covered with iodoform gauze. Practised early, in the absence of glandular infiltration, and with the employment of iodoform to remove the danger of septic pneumonia, extirpation of the larynx would appear to be a more hopeful procedure than is generally supposed.

NITROUS OXIDE AS AN ANÆSTHETIC IN LABOR.—Dr. Tittel gives a report (*Wiener Med. Blätter*, March 15th) of over fifty trials which he has made of the inhalation of nitrous oxide gas in parturition. He employed it chiefly in primiparæ with very severe pains, and found a diminution of the suffering in every case. He found it acted better when given in the first stage, as its effects lasted into the second, and quiet inhalation was more difficult when it was attempted to be given in the second stage. The pulse was generally retarded, and the fœtal pulsations, on the contrary, generally accelerated. The pains were in many cases increased in strength and frequency, and Dr. Tittel found this action of the gas very serviceable in multiparæ with few and weak pains. Vomiting was arrested in four cases by the inhalation of the gas, and the only evil results which were observed were two cases of convulsions, one hysterical and the other true epileptic.

MELÆNA NEONATORUM.—Dr. Epstein, of Prague, discusses this subject in the *Allgem. Wiener Med. Zeit.*, and points out that the occurrence of hemorrhage from the stomach and intestines of new-born children is by no means uncommon. He considers that a distinct disposition to hemorrhage from various organs must be recognized as belonging to the first few days of life. This disposition is made manifest or increased, when either disturbance of circulation, or disease of vessels, or of the blood itself, is present. The notable alteration in the circulation which takes place at birth must therefore be regarded as a principal cause of the hemorrhage, and especially in cases of protracted labor, or of children born in a state of partial asphyxia, or of weakly children with atelectasis of the lungs. Various conditions have been found in the gastro-intestinal mucous membrane: hyperæmia, hemorrhagic erosions, ulcerations, and actual hemorrhage. In many cases, where the mucous membrane of the stomach has been found sprinkled with small ecchymoses, small rounded ulcers have been discovered; and these have by some authors been regarded as the real cause of melæna neonatorum, the ulcers themselves being brought about by thrombosis or embolism of the gastro-duodenal vessels, secondary to thrombosis in the umbilical vein. This is probably, however, the

rarest cause for the hemorrhage; the most common cause being the hyperæmia and temporary congestion of the finer capillary vessels. Although ulceration may take place with extreme rapidity after birth, it would appear that it is usually of intra-uterine origin; and several cases are recorded where such ulceration has led to actual perforation of the intestine or stomach. Another group of cases is formed by those of children infected with septic diseases or the subjects of hereditary syphilis. In the latter cases the hemorrhage may be the only evidence of the disease, the liver being found free from any syphilitic mischief. In the cases in this group, the prognosis has been clearly shown to be unfavorable. About half of the cases end fatally, and the immediate cause of death is usually the hemorrhage itself. A few cases, however, recover with marked rapidity.

Cervical Pachymeningitis.—Charcot (*Le Progrès Méd.* No. 19, 1883) describes a case of paralysis due to cervical pachymeningitis. He points out that such cases pass through three stages: 1, the neuralgic period, characterized by severe pains and sense of constriction in the chest, a stage which lasts four, five, or six months; 2, the paralytic period in which paralysis occurs, accompanied by muscular atrophy; and 3, the spasmodic period, in which the lower limbs are affected by a spasmodic paraplegia, the result of a transverse myelitis with descending degeneration of the lateral columns. The pathology of this affection is an inflammatory thickening of the dura mater, which may involve to some extent the nerves passing through it and the adjacent end, but in the main the symptoms are due to the compression of the inflamed membrane. Such cases occur independently of any diathesis or specific cause, often as the result of living in a damp place. Ultimately recovery may take place. In the case quoted this occurred partly spontaneously, partly as the result of treatment which chiefly consisted of the actual cautery over the seat of the disease. Afterward there remained great contraction of the hamstring muscles, but these were divided subcutaneously, and by electricity and friction the patient recovered so far that he could walk about the hospital and go the distance of a mile without much fatigue.

Laparotomy in the New-Born.—At a recent meeting of a medical society in Vienna (*Wiener Med. Blätter*, Dr. Felsenreich showed a child, two weeks old, on whom he had performed a radical operation for the cure of umbilical hernia. The birth had been easy and natural, and the child itself was strong and healthy, with no other malformation. A tumor of the size of a lemon was situated in the abdominal wall, the umbilical cord being attached to its summit. The separation between the recti muscles was eight centimetres long and four centimetres broad, and contained intestines and the margin of the liver. Twelve hours after birth the operation was made in the usual way, the hernial sac being attached to the edge of the skin-wound, which was closed by twelve silk sutures, and dressed with iodoform. The operation was completed in twenty minutes, without much sign of pain on the part of the child, which took the breast immediately afterward, and had a normal stool on the second day. The progress of the case was very satisfactory throughout, although the healing of the skin was somewhat slow.

Invisible Cutaneous Perspiration in Healthy and Febrile Children.—Dr. Eckert, in the *Vratch*, publishes the results of her observations on thirty healthy children from two to fourteen years of age, and on twenty-seven suffering from various febrile diseases. The age of the febrile children varied from eighteen months to thirteen years. The conclusions at which the author has arrived are summed up thus: *a. For healthy children.*—1, invisible loss of water by the skin in children proceeds with greater energy than in adults; 2, the loss is greatest in children of younger age (under five years), and gradually becomes less as age, height, and weight advance; 3, all conditions being equal, any rise of barometric pressure increases loss of water by the cutaneous surface, while any increase of the humidity of the surrounding air inhibits invisible perspiration. *b. For febrile children.*—1, in the febrile state invisible perspiration is augmented; 2, in enteric fever, the greatest loss of water by the skin coincides with the period of maximal mean daily temperature, afterward invisible perspiration decreases with the fall of febrile temperature, and in the period of convalescence it descends considerably below the normal level; 3, similarly, in the course of relapsing fever, there is observed more or less considerable increase in invisible perspiration during the attacks; having reached its maximum at the time of crisis the amount of evaporation rapidly falls, though during the first twenty-four or thirty-six hours after the crisis it remains still rather increased above the standard. During the apyretic intervals and after the termination of the disease cutaneous loss of water falls below the usual level; 4, in scarlatina invisible perspiration is considerably increased.

Trophic Disturbances of the Skin in Ataxia.—Drs. Ballet and Dutil report (*Le Progrès Médical*, No. 20, 1883) three cases of a sort of ichthyosis of the skin of the anæsthetic or hyperæsthetic regions in tabes. The skin was usually reddened, lax, thrown into folds, and the epidermis was increased in amount and sometimes desquamating. They summarize these results in the following propositions: 1. In tabes we may observe permanent trophic disturbances of the cutaneous system. 2. These trophic disturbances are very different in appearance and evolution from those hitherto described. The skin-eruptions (herpes, etc.), ecchymoses, and even perforating ulcer, are the effects of simply transient and accidental phases. Ichthyosis is, on the contrary, a dystrophy of slow evolution, apparently progressive, like the lesions of bone. 3. This dystrophy is manifested by a kind of thickening of the skin, with more or less deepening of its color, laxity of the integuments, desquamation of the epidermis, the *débris* of which sometimes accumulate so as to form true scales on the surface of the skin. 4. The regions in which these changes are observed are also those in which marked disturbances of sensation may be found, lightning-pain, anæsthesia, hyperæsthesia to cold, to pricking, sometimes to simple contact. The extremities are the parts generally attacked. The skin of the back of the hand may come to resemble the skin in pellagra. 5. The loss of the nails and their alterations, as described by Joffroy, Pitres, Roques, and Dorneaux-Juron, seem to be examples of this cutaneous dystrophy, affecting the matrix of the nail.

Galium Aparine as a Remedy for Chronic Ulcers.—Dr. Quinlan (*British Medical Journal*) has treated cases of chronic ulcer with great success, by means of poultices made from "Cleaver's" (*galium aparine*). It has been, he states, used with the most marked success in the following manner. Grasping in the left hand a bundle of ten or twelve stalks, with a scissors held in the right hand, the bundle is cut into pieces about half an inch long. These are thrown into a mortar, and pounded into a paste. This paste, which has an acrid taste and slightly acrid smell, is made up into a large poultice, applied to the ulcer, and secured with a bandage. It is renewed three times a day. Its action appears to be a slight, steady stimulant, and powerful promoter of healthy granulation. Its effect in one most unhopeful case was decisive and plain to all. Healthy action ensued, and has since steadily continued; and, after a month of treatment, the two ulcers have been reduced to considerably less than half their original size. A difficulty at once suggests itself as to its general employment, viz., that in winter and spring it is not to be had at all. It appears, however, that this difficulty can be effectually met by the method of ensilage, by

means of which green food for cattle has for the last few years been kept perfectly sweet and fresh by burying it in silos under the ground. This plan is generally known, but all particulars about it can be learned in the pamphlet of Mr. Thomas Christy, F.L.S. (Christy & Co., 155 Fenchurch Street, London, E.C.). In the case of the galium, the process would consist of cutting the herb very fine, ramming it down by screw-pressure into a glazed earthenware jar with an air-tight cover, and burying it in the ground. Thus secured from air, moisture, and heat, it would be likely to keep through the winter. This plan, if successful, might be extended to other pharmaceutical herbs; for Dr. Quinlan has always had the idea that green herbs are more powerful than dried ones. Indeed, the late Mr. Donovan, of Dublin, used to maintain that, to make tincture of digitalis properly, the alcohol should be brought to where the foxglove was growing, and the live plant plunged into it.

Imperforate Hymen Persistent in Labor.—In the *British Medical Journal*, May 12, 1883, Dr. Edwards describes the following case: At 11 P.M., April 25, 1883, he was called to see S. O——, primipara, aged thirty-two, said to have been in labor since Monday morning, the 23d ultimo. He found the patient suffering from severe "pains." On digital examination, he was somewhat surprised to find that the orifice of the vagina was completely closed by a tough membrane. Anteriorly, it was comparatively thin, and attached to the edge of the vaginal orifice, whence it sloped gradually backward until, at the posterior wall, it was attached an inch and a half from the orifice. Here it was very thick, and gave the same sensation to the finger as the walls of the vagina itself. The fœtal head could be easily felt through the tissue, which was perfectly lax, resisting all efforts at rupture with the finger. Having decided to give the uterus time to do its best, he left, calling again at 4 A.M.; but, though the pains had been strong and frequent, things were much in the same condition. By sawing with the nail at the thinnest part, he eventually got the end of his finger in, and tore the hymen by drawing the finger backward, until about half way across, but he could not manage it farther. He then waited an hour, in the hope that the remaining half would not be sufficient obstruction to delivery; but, "pains" becoming short and slight, he put on a forceps, and delivered without difficulty. The patient went on satisfactorily. This case is medico-legally interesting, as showing that one single act of copulation, in spite of the seeming difficulties of the case, sufficed for impregnation.

Cystotomy by a Modified Lateral Method.—Mr. Reginald Harrison writes to the *British Medical Journal* that the selection of a method for opening the bladder should have reference only to the object to be attained, or the contingencies that may arise. If, for instance, we desire merely to introduce the finger into it, as a preliminary to extracting a small stone, the median operation answers perfectly; while, if a larger stone, or an unknown quantity of anything has to be dealt with, the lateral incision will, as a rule, be preferable. It has been advanced by those who favor the median incision, which is practically an urethrotomy, that it is both simple and safe; its admitted disadvantage lies in the comparatively small space it provides for manipulating and extracting; while, on the other hand, the lateral incision, though affording more room, is considered to be attended with an increased risk and a greater degree of difficulty, so far as its performance is concerned. The median operation need not necessarily involve anything more than the opening of the membranous urethra. The completed lateral operation further includes the division of structures constituting the neck of the bladder; and it is to this part of the proceeding that any increased risk or difficulty is to be attached. A little reflection shows that it is possible to closely assimilate the lateral with the median operation, that is to say, to dispense with the incision, not to the staff, but along the staff, should it be found, on exploration with the finger, that the additional room which the latter part provides is unnecessary for the object in view. It need hardly be said that this modification of the lateral method, where it is found, on digital exploration, to be feasible, frees the operator from executing the only portion of the operation to which any increased risk is attached; while, on the other hand, he has the consciousness that, should it turn out to be necessary, he can, by the completion of the deep incision along the staff, avail himself of all the advantages which are conceded by surgeons to the lateral method of opening the bladder.

The Oxytocic Action of Quinine.—Dr. Hartigan, in the *British Medical Journal*, June 2, 1883, says that, in three different cases he had to discontinue the use of quinine, because it brought on "labor-pains," though the doses used were small, varying from three to five grains, In one of these, during a previous pregnancy, another medical man used quinine, and discontinued it for a similar reason. All three were in fair general health, suffering only from slight malarious fever, and had never aborted. One case has come under his notice in which abortion took place, without apparent cause, after a ten-grain dose of quinine. The patient was the mother of several children, had not previously aborted, was in good health, and took the quinine to cure facial neuralgia. This action of the drug is known to the Chinese, who take it for the purpose of producing abortion, following its use by copious draughts of hot tea. Quinine certainly, in some cases, increases the menstrual flow.

Hysterical Trance.—Dr. Rosenthal reports an interesting case of hysterical trance in which a country practitioner declared death to have ensued. A looking-glass held to the mouth did not show any moisture, and melted sealing-wax dropped on the skin caused no reflex movements. Rosenthal, who was accidentally present, found the skin pale and cold, the pupils contracted and insensible to light, the upper and lower extremities relaxed, the heart's impulse and the radial pulse imperceptible. Auscultation, however, showed a feeble, dull, and intermittent sound in the cardiac region. No respiratory murmurs were audible. All the muscles of the face and extremities responded well to the faradic current. Although the patient had been apparently dead for thirty-two hours, he thereupon informed the relations that it was only a trance, and recommended that attempts at resuscitation should be perseveringly followed. On the following day he received a telegram to say that the patient awoke spontaneously twelve hours afterward, and gradually recovered her speech and movements. Four months afterward the patient called upon him, and informed him that she knew nothing of the commencement of her attack of lethargy; that she had afterward heard the people about her talk of her, but had been utterly unable to give the slightest sign of life. Two years afterward she was still alive and tolerably well. Rosenthal appropriately likens this condition to that of "nightmare," where, in spite of distressing sensations, the dreamer is unable to call for help or to make any movement which might save him from some imaginary impending danger.

Effects upon Local Temperature of Nerve-Stretching.—Dr. Redard has determined, from experiments upon dogs and rabbits, that the temperature of a leg falls 1° to 2° C. immediately upon stretching the sciatic nerve. Exceptionally there is at first a slight rise, followed speedily by a lowering of the heat of the part. It is worthy of note that the temperature of the opposite leg also falls slightly, a fact which would go to show that nerve-stretching exerts some influence upon the central nervous system. The temperature of the sound side rises to the normal in a few days, while that of the other side requires months for its restoration.—*Centralbl. für Chirurgie*, April 21, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, July 21, 1883.

CONCERNING HOSPITAL INTERNES.

THE letter of a late resident in one of our metropolitan hospitals brings up some questions which are not often discussed. They are eminently proper ones and can be viewed consistently from several stand-points. There is no doubting the fact that the relations at present existing between the visiting and house staffs of many of our large charities could be much improved by a better appreciation of mutual obligations.

It is too often supposed by the visiting physicians and surgeons that their whole duties are performed when the patients are simply prescribed for, and the necessary directions to such an end are given to the resident. By a large majority of men holding hospital appointments little else is done. The consequence is that the house staff becomes careless, apathetic, and shiftless. There is not that interest in the cases which they would, under other circumstances, gladly feel, not that incentive to study, which is always associated with the reception of new ideas with the opening up of new fields of inquiry. An interesting practical teacher always develops earnest and energetic learners. The steel and the flint are made for each other, and when each fulfils its function there is no trouble in getting the spark. But there are men in this city who occupy positions in some of our large hospitals who make no pretence at teaching; who feel no more concern for the resident than for the chief nurse. Hence the cause for just complaint on the part of our correspondent. The interne has a right to feel that something is due him in the way of practical and painstaking instruction at the bedside. There are many ways of doing this, but the nearer the student can get to the patient the better. There is nothing like feeling disease, so to speak. The house staff should have the fullest opportunities for this sort of study at the bedside, and under the direction of the attending physician or surgeon. It should be an education of the senses as well as of the intellect. As no one can get too much of such training nothing can be wasted on the student. No one feels a pulse intelligently, listens to a râle or murmur, appreciates a crepitus, recognizes a cast, passes a catheter, or even opens an abscess without learning something more each time. But how few of our hospital teachers care to take this trouble goes without the saying. There is altogether too much catering to the ordinary medical student, too much ambition to feed large clinics, too much of a desire to secure interesting cases for the amphitheatre to allow of that more practical and profitable teaching in the ward, and in actual contact with the patient, which every student who wishes to treat disease finds sooner or later to be a fundamental necessity of his medical education. When so much is done by wholesale and long range, when patients are seen only through an opera glass, and the student merely told what he should hear and see, there is, of course, considerable difficulty in bringing the producer and consumer together. But the hospital interne has gone through this kind of instruction, he knows how little there is in it, and has a right to ask for better opportunities.

We should be sorry to say that this neglect of the internes was the rule, we hope it is not. We know that there are many hospital teachers who are doing this kind of teaching quietly and efficiently, and with very satisfactory results. But on general principles the foundation of the complaint of the ex-resident is a good one, and there is a great chance for the necessary improvement. The show of benefits is retroactive all around. Patients are better cared for, visiting physicians and surgeons become more attentive, internes more zealous, science more advanced, and the reputations of the hospitals better established.

It is not our intention to do more than allude to one or two points in the ex-resident's letter. Certainly a very important one is that which refers to the necessity of giving necessary instruction to gentlemen who are to administer anæsthetics. We are surprised to learn that this is not done more universally. To know how to administer an anæsthetic properly is high art. It requires knowledge in the first place and experience in the second place. From all accounts, those who administer anæsthetics, have as a rule neither of these advantages. Next to that of the operator himself, the administrator of ether or chloroform has the greatest responsibility of any around the table. In view of this fact, acknowledged by all experienced surgeons, it is certainly strange indeed that the junior assistant should be selected for this duty and that too without any other instruction than he can pick up from his own experimental endeavors. This certainly should not be. The most experienced man of all should be selected for this duty; in fact it would be wiser and better to have an anæsthetizer attached to each hospital. But the least of all that can be said when nothing better can be done, is that the juniors should be most carefully instructed before being intrusted with lives of patients during the critical periods of formidable surgical operations. And yet such is done in almost every large hospital in this city, and under the eyes of the most experienced surgeons. One is almost made to think that the administration of ether is a matter of very little consequence, that deaths do not occur from carelessness, and that the patient has little if any right to careful and skilled treatment during a time of utter helplessness and dangerous probabilities. Our correspondent does not put the case a whit too strongly, in urging a radical change in our ordinary methods of ether administration.

THE PROFESSION'S GREATEST NEED.

IF we were to ask the average practitioner in city or country what was the greatest single obstacle to his progress, he would doubtless say, a field too much occupied. It is the constant appearance of new men,

young, eager, and hopeful, which cuts off here and there the extension of his practice, and which threatens to narrow down that which he already possesses.

Protection against a horde of superfluous rivals is what the general practitioner, who is himself well equipped and competent, most needs.

How can he secure this protection? There is but one way which is at all practicable, and that is by elevating the barriers, so-called, which now mark the entrance to the medical profession.

If every college in New York State was obliged to give a four years' course, if the graduates and outsiders were obliged to submit to an examination by a Board before they could get a license, should we have ten thousand doctors in this State with only three thousand fit to go in the Green Book?

Now, since there is in our State, as well as in most others, an evil so palpable, so obtrusive, so pernicious, that not an educated physician fails to see and feel it; and since there is also a partial remedy for it at least, we say that the profession ought to devote its strongest energies to applying this remedy, to elevating the status of medical education, and to keeping incompetent excess from its ranks. Here is "something worth fighting for," as our contemporary of Buffalo has well said.

The practical result of changing the old Code to the new Code, or the reverse, will now be trivial. Doctors wil act as their characters determine them to act. The President of the American Medical Association says that the by-laws of that association permit consultations with irregulars, others think they do not. He (the president) thinks these by-laws should be changed; the Judicial Council think not. The matter as it stands is in an admirable state of complexity.

Meanwhile we say to our readers and to physicians everywhere, work for what most affects your daily bread; protect yourselves by reforming the methods of educating and licensing medical students, by laying a hand upon the colleges, and saying, "We protest against college professors growing rich on the fees of these half-educated, two-term doctors whom you turn abroad every year to compete with us."

In the light of the real needs of the profession few things could be more scandalous, than that medical colleges should advertise themselves as supremely ethical when they have not the courage to sustain long courses or even to demand preliminary examinations. The matter is in a nutshell. There is money in being orthodoxly ethical; but a three-term course, a careful educational system, is expensive.

THE PRODUCTION OF HEAT IN THE BODY.

A DISCUSSION of certain heat problems is particularly appropriate at this season. The investigations of Helmholtz, Dulong, Frankland, and Barral have shown quite definitely the source, amount, and loss of heat in the animal body, in other words, the heat-balance during the twenty-four hours. The unit usually employed now in these measurements is the "Calorie," which is the amount of heat required to raise one kilogramme of water one degree Centigrade. An adult man breathes in daily about ten thousand quarts of air, of which one-fifth is oxygen. This oxygen is distributed through the body, firing the different tissues. It is at last thrown off in union with C, as CO_2, of which the amount is 878 grammes daily (Scharling), and in union with H, as water, 13,615 grammes daily. The total amount of heat produced by this chemical action of the inspired oxygen is estimated by Helmholtz to be about 2,050 calories. It is an amount of heat that would raise 4,200 pounds of ice-cold water from 32° F. to 33.8° F.

But besides this, it is estimated by Dulong that about twenty-five per cent. more of heat is produced from other sources, *i.e.*, from the food. This makes a total of 2,550 heat units produced daily by an adult man who is not engaged in muscular work.

The heat thus produced is almost entirely lost by radiation and conduction (seventy-three per cent.) and by evaporation of sweat (14.5 per cent.) from the skin. Only about ten per cent. is lost by the lungs, and two per cent. by the excretions and the introduction of cold food and drinks.

The difference, however, between the amount of heat produced during a day of rest and one of work is very great, and the figures are suggestive, if not instructive at this particular time. During active muscular work the amount of heat developed by an adult is more than half as much again as when one is at rest. The ratio can be best expressed as follows: A man sitting quietly in his room, indulging in no excessive vituperation against obtrusive flies, generates about one hundred heat units (calories) an hour. If he falls asleep, this amount sinks to forty or fifty calories per hour. If he wakes up and insanely attempts to chop wood, the amount rises to one hundred and fifty calories or more per hour.

The hygienic deductions to be drawn from the foregoing are: Keep the body quiet, and the skin active. It is a fact, which should be mentioned here, that large draughts of water do not necessarily produce diaphoresis unless the water is hot. The absolute cooling effect of a large tumbler of ice-water is trivial. In raising it to the temperature of the body the equivalent of about ten units of heat is abstracted.

THE DIAGNOSIS OF MOVABLE KIDNEYS.

IT is an evidence of the minuteness and care with which modern medical science attacks the various problems before it when we find a whole book devoted to the diagnosis of "l'ectopie renale," or misplaced movable kidney. Dr. Frédéric Buret is the author of such a work,[1] and it is a contribution of practical value to physicians. Although less than one hundred cases of movable kidney have been, so far, reported, it is a trouble which is no doubt much more frequent than is supposed. Such is the opinion of Buret, and Dr. William Roberts, and others, and it is strongly supported by the investigations of Oppolzer, who in a series of five thousand five hundred patients found that twenty-two had movable kindeys, giving a proportion of one in two hundred and fifty. It is not improbable, as Roberts says, that many cases of obscure abdominal pain and of gastro-enteric disturbance are due

[1] Du Diagnostic de l'Ectopie Rénale, par le Dr. Frédéric Buret, Aux Bureaux du Progrès Médicale, pp. 93. Paris, 1883.

to this cause. Movable kidney occurs in women much oftener than in men, the proportion being as six to one. It is generally an acquired trouble and its existence is due chiefly to parturition, tight-lacing, sympathetic renal congestion during menstruation, and violent exercise or injury. The most prominent symptoms are, a dragging pain in the loin, and gastro-intestinal disturbances, nervous symptoms, hysteria, and hypochondriasis may also be provoked by it. Epigastric pulsation is often present, but the only certain evidence of the trouble is, of course, the presence of a movable tumor which can be felt.

The chief value of Dr. Buret's work is in the collection of cases which he has made illustrating mistakes in diagnosis. These cases, fifty in all, he divides into three classes: 1st, those in which no tumor was recognized, and no idea of the real trouble was obtained; 2d, those in which a diagnosis was vaguely formulated; 3d, those in which a tumor was discovered but its nature not recognized.

In the first class he cites fifteen cases. These had been treated as cases of crural, or lumbo-abdominal neuralgia, of renal colic, hepatic colic, *embarras gastrique*, hysteria, and chronic peritonitis.

In the second class, the trouble had been mistaken for "abdominal tumor," and "affection of the liver." Moxæ were applied in some cases and operation suggested.

In the third case, a diagnosis was made of biliary obstruction, enlarged liver, tumor of right lobe of the liver, cancer of the liver, enlarged gall-bladder, biliary calculus, cancer of the pylorus, displaced spleen, and ovarian cyst.

The list thus given sufficiently illustrates both the inventive imagination of the doctor and the various symptoms which renal ectopia may produce.

SEXUAL ADVERTISEMENTS.

Some time ago we called attention to the fact that certain enterprising medicine-vendors were hiring men to promenade Broadway, bearing dorsal and ventral placards, which announced the virtues of a certain drug in sexual weakness. The erotic procession referred to appeared then, as it does now, strikingly suggestive of the ancient orgies of Priapus; but it was only a sign of the times.

The Americans are the most advertising of all nations, and it is to be expected that helps for the erring and erythritic should nor be left out. Nevertheless, a line should be drawn, and we submit that remedies for sexual disease are now being forced before the public to an excessive, disgusting, and injurious extent. A person walking one of the side avenues of this city is liable to have thrust into his hand the card of a gonorrhœa specialist, or the advertisement of a safe, sure, and speedy cure for certain sexual ills. Telegraph poles and fences are placarded with condensed but significant descriptions of choice measures in urethral therapeutics; our larger concert gardens, in which beer and music are dispensed to the temporary comfort of the flesh, contain upon their programmes notices of potent "urethrines" and pocket syringes. As for the press, we have already commented on the drift of the religious impulse as evidenced by the advertisement of gonorrhœa cures in the religious weeklies. The secular papers have long been filled with every sort of sexual advertisement.

Perhaps all this is part of our evolution and cannot be helped; nevertheless, it might be worth while making a little effort to check it. It is injurious to public morals and public health, this constant obtrusive forcing forward of sexual drugs and the sexual system. Besides, decent men and women would like to be able to look at a fence or a telegraph pole without finding the cut of "The Perfect Syringe" focussed on their retina. There is a law against committing nuisances, which perhaps Mr. Comstock might interpret to the public's advantage here.

THE NATURE OF PEPTONE, AND ITS FORMATION OUTSIDE THE DIGESTIVE TRACT.

Dr. Alexander Poehl, of St. Petersburg, in an inaugural thesis, has presented the results of his researches into the nature and formation of peptone. Some of the results which he announces are novel and deserve consideration.

Poehl investigated different tissues and fluids of the body in order to discover whether peptone could be found outside of the gastro-intestinal tract. His results confirmed what had already, to some extent, been shown, that peptone does exist in these places. Thus, it is found in appreciable quantity in the blood, in urine, sweat, sputa, the fluid of ovarian cysts, in hydrocele, in cancerous tissue, in the pus of cold abscesses, and in pleuritic exudation. Poehl found peptone in sixty-five per cent. of the specimens of urine obtained from two hundred and thirty-three febrile cases in Eichwald's clinic. He found it in cases where the urine was neutral or alkaline, thus disproving, as he thinks, the view that it is the result of a digestive action occurring in that fluid. He also found that normal filtered acid urine had no peptic acid when brought in contact with albumen.

In order to explain the presence of peptone in these various fluids, Poehl undertook a series of experiments for the purpose of finding whether there was not some peptic ferment in the tissues themselves. His results corresponded with his expectations. Fresh macerated kidney, acidulated and placed in solution with albumen, displayed a peptic action, considerable peptone being produced after a few hours. The same result was obtained with lung-tissue and with pieces of the small and large intestine. Poehl concludes, therefore, that the tissues of the body all (!) have some peptic power. In croupous pneumonia the ingenious hypothesis is offered that the ferment of the lung-tissue digests and dissolves the exuded fibrin. In confirmation of this view he cites the fact that in croupous pneumonia peptone is present in considerable amount in the urine. Our author also brings some evidence to show that not only animal but vegetable tissues have this digestive power. He seems to have experimented himself only with lettuce leaves, however, and it must be confessed that he draws his conclusions from a rather small series of experiments.

A chapter is devoted to the methods of turning peptone back into albumen, a process which is no longer new.

Poehl offers some original suggestions as to the real nature of peptone and the peptonizing process. There

have been three views held by physiological chemists as to this matter.

Thiry considered albumen and peptone to be simply isomeric. Herth, also Loew and Bokorny, consider the albumen, into which peptone is turned back, a "polymerization-product" of the latter.

Most physiologists, however, have of late held that the peptonization of albumen is simply a hydration and doubling-up of the proteid molecula. All admit that a certain amount of chemical action takes place.

Poehl contends, however, that peptonization, or, in other words, gastric and tryptic digestion, is a purely physical process, and consists simply in a soaking of the albumen with water to its utmost capacity. He finds that the ease with which the different albumens are digested or peptonized is in proportion to the rapidity with which this capillary imbibition takes place.

His view is based upon the fact that chemical analysis reveals no characteristic difference between albumen and peptone, and that the optical properties of the two bodies are also entirely alike. This latter fact he thinks could not be true if the two bodies possessed any real chemical differences.

News of the Week.

Suing for a Degree of Doctor in Medicine.—A medical student, Mr. Jacob M. Davis, applied for a mandamus to compel the Faculty of the Baltimore College of Physicians and Surgeons to confer on him the degree of M.D. Mr. Davis alleged that the Faculty refused to graduate him after he had attended a two years' course of lectures, on account of his parents, and not for any personal unfitness on his part. It was urged by his counsel, C. Dodd McFarland and H. M. Tiralla, that even if the objection to parents was a valid reason for rejection, it should have been made when he entered as a student. Mr. John T. Morris, for the Faculty, said the Faculty may not have known of the ground of objection earlier. He contended that the act of the Faculty could not be inquired into by the court. Judge Phelps said a mandamus ought not to be granted when there is a remedy by suit, and hence it was denied.

An Epidemic of Glanders.—The State Veterinarian of Illinois reports that glanders is prevalent among the horses in nineteen counties in that State. He claims to have been prevented from killing the animals afflicted, the attorneys of the owners contending that he could only resort to this measure after the governor had issued a proclamation declaring the glanders epidemic. The Attorney-General is now expected to give an opinion as to the powers of the State Veterinarian under the State laws.

Eight more Assistant Sanitary Inspectors were appointed by the City Board of Health this week.

The Progress of the Cholera.—The probability that cholera would reach Cairo, which we suggested last week, turns out to be realized. On July 15th the disease appeared in a suburb of Cairo, and on the 16th several cases were discovered in the city itself. The number of deaths in Damietta has fallen to about thirty or forty a day, simply because the population has flown or has already been destroyed. The disease has been steadily going up the Damietta branch of the Nile. It has appeared in a few outlying towns. The efforts to limit it by military sanitary cordons have been failures, because the lines were broken through. Some of the soldiers themselves have been attacked by the disease. Cholera has appeared among the British troops at Malta, and caused great consternation. The English are trying to justify their alleged negligence in the matter of quarantine by throwing the blame on the medical officers. There is said to be great difference of opinion among the Indian Government's medical advisers as to the question of human propagation of the disease, and the utility of quarantine. This is mere cavilling and casuistry, however, since there is no question that the weight of medical opinion throughout the world is in favor of the view of the utility of quarantine, and a government should accept the safest view, not the one most acceptable to its mercantile interests.

Dr. John A. Warder, of North Bend, O., died on July 14th in the seventy-second year of his age. He was a prominent member of the American Forestry Congress, and the author of several works on fruit-growing and tree-culture.

Royalty at a Medical Society.—The discovery of the *bacillus* appears to have lent additional dignity and social favor to medicine. The Emperor William has deigned to apply his imperial and presbyopic eye to a microscope in order to see these organisms. And recently the Prince of Wales and Prince Lucien Bonaparte attended a *conversazione* given at the rooms of the London Medical Society on the occasion of the opening of an addition to the old buildings The annual oration was delivered this year by Dr. Edward Lund, of Manchester, who discussed and advocated Listerism. His Royal Highness, with great judiciousness, waited until the oration was over, and then came in to the sound of music. A number of interesting objects were shown. Among them were some microscopic specimens shown by Dr. H. Gibbes, including the fungoid growth or organism, producing what is popularly known as the salmon disease (this preparation being illuminated by a cleverly arranged adaptation of the incandescent electric lamp); the *bacillus tuberculosis* in sputum, magnified 1,350 diameters; the bacilli found, in cases of typhoid fever, magnified 1,200 diameters; the *bacillus anthracis* and *spirilla vibrionis*. Other parasites specially affecting the lower animals were shown by Dr. Cobbold, and Dr. Francis Warner lent apparatus for obtaining graphic records of the movements of various parts of the body, and for enumerating these movements and their combinations. The honorary librarian, Dr. Allchin, had selected for exhibition some books from the valuable collection of old works belonging to the society, which comprises many dated in the fifteenth and sixteenth centuries from the library of Dr. Sims. Among these was the manuscript diary of the Rev. John Ward, in one of the fifteen volumes of which, under date of the years 1661–63, the writer had made the following entry: "Shakespeare, Drayton, and Ben Jonson had a merry

meeting, and it seems drank too hard, for Shakespeare died of a 'feavour' then contracted." Another interesting work was Dr. Mead's imperfect reprint of the "Restitutio Christianismi" of Michael Servetus, in which that ardent theologian and observant doctor illustrates an argument by a reference to the passing of the blood from the right side to the left through the lungs.

THE LEGAL VALUE OF HUMAN BLOOD—A CURIOUS SUIT.—A novel law-suit has recently been decided in the District Court of this city. Last February, a man went to a hotel, engaged a room, went to bed and blew out the gas. He was found in a condition of advanced asphyxiation, and lay for hours in an unconscious condition. Drs. Garrigues, Valentine, and Anderson were summoned to attend him, and after consultation decided that the only way to save the man's life was by transfusion. The proprietor of the hotel was accordingly instructed to hunt up a healthy subject who was willing to undergo the operation, and a colored porter, named Edward Banks, was called upon. The proposed subject was by no means inclined to serve at first, but when he was told that only about eight or ten ounces of blood would be needed, and that the blood would be paid for at the rate of ten cents a drop, his cupidity overcame his fears, and he submitted his arm to the instrument. Dr. Garrigues drew eight ounces and transfused it into the arm of the patient, who rapidly convalesced. Banks afterward served the patient as nurse, and claims that he was so overcome by a sense of the obligation which he owed to his preserver that he promised to reward him to his satisfaction. All that Banks received, however, was a five-dollar note in discharge of all obligations, and accordingly he brought suit for $250 which his counsel claimed was the value of the blood at the price agreed upon, 10 cents a drop, together with the value of the nursing given the sick man by the plaintiff. It was estimated that an ounce of blood contained 240 drops, and 8 ounces at 10 cents a drop would thus be appraised at $192, the value of the attendance, etc., bringing the bill up to $250. The examination showed that the promise to pay 10 cents a drop was given in a joking way by one of the physicians, that the plaintiff was a poor man, and that he was nursed by his wife after the first day. Decision for the defendant.

YELLOW FEVER.—Reports of cases being brought to American ports are constantly printed. At date of writing, however, no case seems to have eluded the vigilance of the quarantine officers.

DR. THOMAS F. SCOTT, the oldest and one of the most eminent physicians of Petersburg, Va., died lately, aged eighty years. He was a nephew of General Winfield Scott and an uncle of General P. B. Starke. He was a member of the Virginia Medical Association and was widely known.

A PHYSICIAN'S SELF-DESTRUCTION.—Dr. Lee Pinkston, residing about fifteen miles from Montgomery, Ala., committed suicide recently, by placing a double-barrel shot-gun to his head and discharging it. He was suffering from mental aberration, caused by giving one of his children a fatal dose of morphine for quinine some time ago.

PASTEUR has offered to go to Egypt and study the cholera. Since the Pasteur-Koch controversy pathologists will want Pasteur to refurbish his old-fashioned methods a little before undertaking new fields of investigation.

DR. HENEAGE GIBBES has been appointed to the Chair of Physiology and Histology at the Westminster Hospital. His microscopic work is too well known to call for comment.

THE AMERICAN OPHTHALMOLOGICAL AND OTOLOGICAL ASSOCIATION held its sixteenth annual session at the Hotel Kaaterskill, beginning July 18th.

DR. DONALD MCLEAN, of Ann Arbor, has been appointed Surgeon-in-Chief of the Michigan Central System of Railroads.

DR. W. E. QUINÉ, late of the Chicago Medical College, has been elected to the Chair of Practice of Medicine in the College of Physicians and Surgeons of Chicago.

PROFESSOR ALFRED C. POST has been formally requested to resign from membership in the American Medical Association on the ground that he has signed a paper stating that he is opposed to the present Code of Medical Ethics of the American Medical Association.

Dr. Post has for years sustained the reputation of being one of the best surgeons in the country, as well as being a gentleman of very extensive learning, and of the purest personal character.

It is evident now, however, that he is not a really good man.

THE NEW YORK POST-GRADUATE MEDICAL COLLEGE.—Dr. Charles L. Dana has been appointed to the Chair of Diseases of the Mind and Nervous System. Dr. J. Leonard Corning has been appointed Lecturer on the same branch.

DR. W. T. BELFIELD has been appointed Assistant Pathologist to the Cook County Hospital.

THE SUPPORTERS OF THE OLD CODE IN THE STATE OF NEW YORK.—The Council of the New York State Medical Association for Upholding the National Code of Ethics has issued a circular, dated June 21st, in which the numbers of those who uphold the old Code in the various counties of the State are given as follows: Albany, 40; Alleghany, 14; Broome, 28; Cattaraugus, 14; Cayuga, 20; Chautauqua, 26; Chemung, 21; Chenango, 46; Clinton, 27; Columbia, 14; Cortlandt, 22; Delaware, 16; Dutchess, 40; Erie, 107; Essex, 14; Franklin, 15; Fulton, 10; Genesee, 15; Greene, 17; Herkimer, 25; Jefferson, 23; Kings, 148; Lewis, 11; Livingston, 11; Madison, 19; Montgomery, 16; Monroe, 53; New York, 742; Niagara, 25; Oneida, 58; Onondaga, 66; Ontario, 21; Orange, 18; Orleans, 16; Oswego, 20; Otsego, 15; Putnam, 7; Queens, 44; Rensselaer, 74; Richmond, 11; Rockland, 9; St. Lawrence, 13; Saratoga, 27; Schenectady, 12; Schoharie, 12; Schuyler, 12; Seneca, 21; Steuben, 18; Suffolk, 18; Sullivan, 17; Tioga, 19; Tompkins, 13; Ulster, 19; Warren, 18; Washington, 10; Wayne, 24; Westchester, 44; Wyoming, 12; Yates, 9.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, May 23, 1883.

ALFRED C. POST, M.D., PRESIDENT, *pro tem.*

DR. SATTERTHWAITE presented, in behalf of a candidate, a specimen of *pulmonary tuberculosis with marked thickening of the pleura, slight endocarditis, and acute nephritis.*

DR. FERGUSON presented, in behalf of a candidate, a specimen illustrating *subinvolution of the uterus.*

DR. SATTERTHWAITE, from the Committee on Microscopy, reported that the tumor presented by Dr. Robert Newman, at the stated meeting held February 28, 1883 (see MEDICAL RECORD, vol. xxiii., p. 331), was carcinomatous.

DR. FERGUSON presented a specimen of

ANEURISMAL DILATATION OF THE HEART AND MITRAL STENOSIS—FIBROID INDURATION.

It was removed from the body of a man twenty-seven years of age, a native of Germany, single, and a clerk by occupation. Both his parents suffered from rheumatism, and his father, he said, died from asthma. Three years ago the patient first suffered from rheumatism, and at that time and ever since has been troubled with dyspnœa and cardiac palpitation. Three weeks previous to his admission into the New York Hospital, on March 12, 1883, his palpitation and dyspnœa became so aggravated that he was unable to attend even to light work. At the same time he began to suffer from a severe cough, the expectoration being scanty, white and frothy, and at times streaked with blood. His general condition was poor, and his respiration was much embarrassed. The apex-beat was in the mammary line and sixth space. There was a sound, presystolic and systolic in character, heard most distinctly at the apex, and transmitted to the right toward the sternum and axilla on the left side. The præcordial area of dulness was greater than normal. He was put on tonics and stimulants, and improved considerably, although he constantly complained of præcordial pain. In the latter part of March and during the month of April he was allowed to sit in his chair, and at times to walk about the ward. His cough almost entirely disappeared, there was no dyspnœa except on exertion, and his heart-action was considerably improved.

While in the hospital, temperature ranged between 99° and 102°; his respiration was slightly accelerated, and his pulse, feeble and easily compressible, ranged between 80 and 140 beats per minute.

The latter part of April he began to feel very weak, and was more closely confined to his bed and chair, but did not need any special attention. On May 2d, at 6 A.M., he died suddenly, without aggravation of the symptoms of which he complained since his admission.

Autopsy was five hours after death. There were one hundred and seventy-five cubic centimetres of bloody serum in the left pleural cavity, and seventy-five cubic centimetres of fluid similar in character in the right pleural cavity. There were old adhesions all over the surface of the left lung. Both lungs were congested and œdematous and deeply bronzed. The heart is large; the anterior wall of the left ventricle is bound to the pericardium by a firm band of connective tissue. The left ventricle is enormously dilated, and the left ventricular wall, in places, is less than one-eighth of an inch in thickness, and at the apex there is a portion of the left ventricular wall where the endocardium and pericardium are separated only by the interposition of a thin layer of fat. Posteriorly the ventricular wall is much thicker, being uniformly nearly one inch. The papillary muscles are much hypertrophied. The right ventricle is moderately dilated; the valves on the right side of the heart are normal. The segments of the aortic valve are slightly thickened and retracted. There is stenosis of the mitral valve, admitting only a cylinder one-half inch in diameter. The endocardium is markedly thickened, and throughout the entire left ventricular wall there is increase of the fibrous tissue between the muscle-cells (fibroid induration of the heart), especially marked where the ventricular wall is thinnest, except at the apex, where there is no muscular tissue to be found. There is atrophy of the fibre-cells and much pigment arranged around the poles of their nuclei. The cells in places contain a small amount of fat, but generally the transverse striæ are well preserved.

DR. H. KNAPP presented a specimen of

MELANO-SARCOMA OF THE CHOROID.

The eyeball was removed a few days ago, from a man of about fifty-eight, who two years previously had noticed a cloud in the centre of the visual field of his left eye. The cloud became more intense, was perfectly black in the course of some months, and spread toward both sides, so that six months after the beginning he could see objects only in the upper and lower parts of his field of vision. An oculist diagnosticated detachment of the retina. In a year the sight in his left eye was completely destroyed. He consulted several oculists: the diagnosis was detachment of the retina. When he came to Dr. Knapp, two weeks ago, the external appearance of the eye was normal; the fundus not to be illuminated; sight lost, the eyeball tension moderately increased; other eye healthy. From the symptoms, Dr. Knapp thought the diagnosis of melano-sarcoma behind the detached retina in the posterior part of the choroid was about as sure as it could be without directly seeing the tumor. The enucleation proved the diagnosis correct: a flat, slightly nodular, black growth occupies the posterior third of the choroid, encircles the optic nerve. The retina is united to its surface, thence passes through the vitreous contracted into a cord, and attaches itself to the posterior diaphragm of the eye ciliary processes, zonula zinnii and posterior capsule of the lens. Dr. Knapp pointed out the typically clear clinical history of the case. During the first six months it must have been possible to recognize the tumor directly with the ophthalmoscope; in the last stage the diagnosis was secured by the increased eyeball tension in connection with the detached retina.

DR. GARRISH asked why Dr. Knapp diagnosticated so confidently a melano-sarcoma of the choroid without mentioning the possibility of a retinal tumor. He asked further at what age choroidal sarcoma was observed.

DR. KNAPP said that the intra-ocular tumors, with rare exceptions, were either gliomas of the retina, or sarcomas of the choroid. Glioma of the retina was a disease of childhood, no authenticated cases having been observed beyond the age of twelve years. Sarcoma was met with in young persons, though rarely; in middle life it was commonly unpigmented and past middle life pigmented.

DR. BEVERLY LIVINGSTON presented a specimen which illustrated

MULTIPLE UTERINE FIBROIDS.

It was removed from the body of a colored woman aged thirty years, who was admitted to the Home May 21, 1883. The patient on admission, in the afternoon, did not complain of any severe pain. In the evening a diffuse swelling of the left lower extremities was discovered, extending from the lower third of the thigh to the tips of the toes. The skin was thick, of a livid color; there was marked pitting on pressure, and at numerous points the sense of fluctuation could be detected. On the internal surface, just above the ankle, there was a large circular ulceration, the edges of which were irregular, and the base had a grayish color. There were a number of bullæ filled with blood-stained serum upon the lower third of the leg, and one very large one covering the entire dorsal surface of the foot. The right limb

was œdematous and pitted on pressure. Pulse, 120; respiration, 30; temperature, 101$\frac{8}{10}$° F. Urine, yellow, cloudy, acid; specific gravity, 1012, and contained *seven* per cent. of albumen, hyaline and granular casts, but no sugar. Heart and lungs not examined, because of the great size and feebleness of the patient. Diagnosis, erysipelas of leg.

March 22, 1883.—About 9.30 A.M., as the doctor was going through the ward, pulse, 90; respiration, 22; temperature, 98.2°; a few minutes later the doctor was summoned, but on arriving found the patient dead. *Autopsy*, sixteen hours after death. Body well nourished; rigor mortis well marked; lower extremities markedly œdematous. Woman very fat. Some discharge from vagina; pericardium normal. Heart: Ceased in diastole; tissue soft, fatty, and pale; cavities dilated; aorta showed commencing atheroma, otherwise healthy. All the valves normal. Right lung: Pigmented on surface, irregular congestion; œdema and congestion in posterior portion of lower lobe. Left lung: Pigmented on surface; one small thrombus in posterior part of lower lobe; œdematous and congested like the other. Abdominal cavity—spleen: Not enlarged; post-mortem softening. Right kidney: Two small and one large cyst at upper end; very fatty; cortex irregular and granular; capsule partially adherent. Left kidney: Large cyst, holding one-half ounce of clear fluid in lower portion of kidney, which occupied whole thickness of organ; large, irregularly congested; on section granular appearance of cortex; capsule as in the other. Liver: Small; on section fatty and softened, partly due to post-mortem change.

The uterus was enormously enlarged and contains numerous fibroids, the largest of which is evidently calcareous. One was distinctly intramural. The walls of the uterus were very much thinned, the inner surface was of a grayish color, and emitted an exceedingly offensive odor. Within the cavity were two or three small fibroids, only very slightly attached to the uterus, and undergoing the process of softening. The external os was small, probably would not admit the little finger. The uterus contained a little over one quart of very offensive pus.

The leg did not contain any pus at all, it was simply œdematous, and in the hasty examination made he did not discover any thrombi in the veins.

APOPLEXY—FATTY LIVER.

DR. ROBERT T. NEWMAN presented the liver removed from the body of a man who died suddenly May 12th. The patient, so long as he could recollect, had suffered from derangement of digestion. Ten years ago he had an apoplectic stroke, was unconscious for a few days, the mouth was drawn to one side, and he was paralyzed upon one side, but subsequently regained his intellectual faculties entirely, and also fully recovered his motion. About sixteen weeks ago he was again found unconscious, and it was supposed that he had had another apoplectic stroke. When Dr. Newman first saw him, his abdomen was immensely enlarged, but there was no evidence of accumulation of fluid. The patient's stools were clay-colored, he suffered from diarrhœa, his urine was loaded with bile, and parts of the body were slightly jaundiced. Percussion gave evidence of enlargement of the spleen. At that time Dr. Newman was not able to find any evidence of paralysis, although the patient was unable to move himself in bed. Defecation and micturition were voluntary. He died suddenly eight days afterward from what appeared to be, from the description given, an apoplectic stroke. During life, so far as auscultation and percussion went, the heart seemed to be normal; at the autopsy, only a very limited one being permitted, the liver was removed, and found on microscopical examination to be fatty. It was increased in size, the gall-bladder was empty, and there seemed to be some stenosis of the common bile-duct.

DR. SATTERTHWAITE remarked that the liver seemed to be of the nutmeg variety, and apparently indicated that there was some obstruction of either the cardiac or the pulmonary circulation; probably also there was some increase of connective tissue, as was usually the case with this lesion.

The Society then went into executive session.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, May 5, 1883.

JAMES B. HUNTER, M.D., PRESIDENT, IN THE CHAIR.

DR. BEVERLY ROBINSON presented a patient with

DEFLECTED NASAL SEPTUM—OBSTRUCTED BREATHING—ADENOID GROWTH IN THE LARYNX.

The patient was a young woman who had been suffering for a year and a half from obstruction in the left nostril, for which she had recently applied for treatment. There was a suspicion of her having had syphilis. The nasal septum was deflected to the left, so that the air could not be drawn through the nostril of that side. There was a small adenoid growth in the vault of the pharynx. The patient was considerably more deaf, to the ticking of a watch, in the right ear than in the left. The points of interest were, that despite the obstruction and the adenoid growth in the pharynx, the patient's voice was not at all affected, and that the ear affected was on the opposite side from the obstructed nostril with its deflected and ulcerated septum.

DR. SEXTON examined the drum-heads and found evidence of an old inflammatory change which had probably occurred some years before, when the patient had had an attack of scarlet fever.

DR. C. L. DANA read a paper entitled

THE NATURE AND TREATMENT OF CERTAIN FORMS OF CHRONIC NERVE-WEAKNESS.

[The paper is published in full on p. 57 of THE RECORD.]

The paper being open for discussion DR. H. F. WALKER said that he had used the fluid extract of coca considerably. He had found it to act far better with men than with women, a fact which he was inclined to attribute to the more extensive use of tea by women.

DR. HUNTER said that he had once imported some of the fresh leaves, having been told by gentlemen who had lived in South America that these alone were of any value. They had given good results.

DR. BEVERLY ROBINSON had used a good deal of the Mariani wine of coca, and thought that it had acted very satisfactorily. He happened to have met M. Mariani several years ago, and had been led to place confidence in the genuineness of his preparation.

The speaker had used

HYDROBROMIC ACID

in two conditions: that of vertigo, presumably from stomach trouble, and that of dyspepsia. Its use in stomachal vertigo he had taken from a suggestion by Woakes. He had employed the Fothergill solution.

DR. V. P. GIBNEY, referring to the

PROGNOSIS

in these conditions of nervous invalidism, asked if these patients ever got well. In his experience the cases were most untractable, and however one helped them they were apt to fall back to their former condition.

DR. DANA said that he had once been inclined to take a very gloomy view of the prognosis. He did not know that now he could recall cases of pronounced and long-standing neurasthenia proper which he was sure had permanently recovered. He thought the prognosis better, however, than Dr. Gibney was inclined to paint it. He believed that almost every patient could be greatly im-

proved and life made more comfortable to him. Some cases, undoubtedly, got well.

DR. KINNICUTT said that in his experience these cases do improve, and even become to all intents and purposes well, continuing so for several years. He thought, however, that there was always a tendency to relapse. A case in point had occurred in his experience recently.

DR. POLK said that he supposed the nature of the troubles that go under the name of neurasthenia had never been very definitely made out. He asked if anything of importance had been written on the subject aside from the work of Beard.

DR. GIBNEY said that it was the same old group of symptoms which had been known for a long time. In women we are apt to call it spinal irritation, in men nervous prostration. Some authorities called it hyperæmia, etc.

DR. DANA said that in the first part of his paper he had discussed this question and endeavored to throw some light upon it.

So far as the literature was concerned, the subject had been treated by Bouchut, of Paris, in a work entitled "Du Nervosième," published in 1877, and by Möbius, of Leipzig, in a work entitled "Nervosität," published in 1882. Erb also discusses it, and of late years many German writers (Glax, Burkart, etc.) had been studying the special forms of neurasthenia.

The speaker thought it would be long before we knew the morbid anatomy or chemistry of nervousness and chronic nerve-weakness. We could speak, however, much more definitely about its morbid physiology, and he had ventured to make a contribution to that subject.

DR. SAMUEL SEXTON referred to a case where he had used coca with benefit. He had found it difficult to get patients to take large doses of hydrobromic acid on account of its powerfully acid taste.

DR. HUNTER said that with reference to those cases of nerve-prostration and hysteria which were submitted to the Weir-Mitchell treatment, he had observed that even in patients who were improved, the symptoms often returned soon after passing from the treatment.

ONTARIO MEDICAL ASSOCIATION.

Annual Meeting, held at Toronto, June 6 and 7, 1883.

(From our Canadian Correspondent.)

DR. J. E. GRAHAM, of Toronto, read an exhaustive paper on

THE BACILLI OF PHTHISIS.

The paper treated fully of the question in its present bearings to medical opinion. From a careful analysis of forty cases in Dr. Graham's own practice he concluded that the bacilli are constant in cases of true phthisis. In some cases where they are not found at first, repeated examinations would reveal them. The second point of importance in the paper was that its author leaned very much in favor of the view that phthisis is contagious. He strongly recommended antiseptic inhalations and everything which was of any real value in sustaining the powers of the system.

DR. J. FERGUSON remarked that of 2,509 cases, the statistics of which he had collected, the bacilli had been found in 2,417. Of the cases in which the bacilli had not been found sufficient care was not taken, as in many of these cases few examinations of the sputa were made. After making all due deductions for error there seemed to be some relationship between the numbers of the bacilli and activity of the disease. Further he believed that phthisis is really a contagious disease; but thought observers might be led into error for the following reasons: 1, Phthisis from its very nature would be likely to have a long incubation period, and thus the true source of infection might be overlooked in many cases; 2, that the germs seemed, from carefully conducted experiments, to lose their vitality soon after their ejection from the body in which they were produced; 3, few germs are contained in the expired air, yet if this be concentrated and passed through a cage holding small animals these can be rendered tubercular in this way; and 4, in many cases these germs came in contact with persons of sufficient power to resist them, just as in the contagion of other diseases. With regard to treatment he held: 1, that rest was of great importance, as the lungs had not so much work to perform; 2, good nourishment of every kind; 3, elevation to a height of about 4,000 feet; 4, antiseptic inhalations, which ought to be kept up almost constantly; and 5, isolation of the patient from sleeping with others in the family, or too close intimacy.

DR. I. H. RICHARDSON agreed in the view that phthisis was possibly one of the most contagious class of diseases.

DR. BURT, of Paris, exhibited a patient who had been a very severe example of

TRAUMATIC TETANUS.

The wound from which the disease originated was on the lower front part of the forearm. He practised complete insulation of the forearm by a thorough dividing of the nerves supplying it. The patient made an excellent recovery.

DR. STRANGE, of Toronto, read a paper on

ACETONÆMIA.

He thought that the presence of acetones in the blood was the cause of the coma in diabetes. He referred to the hopelessness of diabetic coma, and expressed the desire that ere long we would be in a better position regarding treatment.

In the discussion that followed DR. J. FERGUSON held that the coma was not due to acetones in the blood, and further that the acetones did not depend upon the sugar condition of the urine for its existence in the system. Jaksch, of Vienna, has found acetones to exist in the blood in febrile states of the body, in cases of carcinoma, and in hydrophobia. Frerichs, of Berlin, from an examination of four hundred cases, concludes that, 1, the nerve-centres are not the real cause of the coma; 2, that the changes in the blood do not sufficiently explain it; 3, that uræmia is not the cause, as coma is found without uræmia; 4, that fat emboli is not the cause, for in some cases of coma no evidence whatever existed to show that emboli had anything to do with the trouble; and 5, that acetonæmia is not the cause of the coma. Frerichs regards the necrotic changes in the kidneys as the real cause of the coma.

DR. J. FERGUSON read a paper on

THE LIGAMENTUM TERES IN ITS RELATION TO HIP-JOINT DISEASE.

He showed that the ligament prevented undue rotation of the leg outward; and secondly, that if of normal length it prevented the femur coming in contact with the acetabulum. In a normal hip-joint there is a slight interval between the femur and the os innominatum. Thus the pelvis is suspended from the thigh bones by the round ligaments. Should these ligaments be lengthened or ruptured from jumping or wrestling severe trouble may ensue. He gave an instance of a case where hip-joint disease was in its early stage. The boy had been greatly addicted to jumping from high places. The patient died of pneumonia; on a careful dissection of the joint the round ligament on the affected side was found slightly ruptured and lengthened, permitting the head of the femur and the acetabulum to come into close apposition.

DR. MCPHEDRAN showed

A CASE OF TRUE PRURIGO,

which he was treating with very good results by the hypodermic injections of nitrate of pilocarpine. As much as one-grain doses had to be given before diaphoresis could be produced.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CHOLERA IN EGYPT—THE HARVEIAN ORATION BY DR. HABERSHON—MEDICINE AND RELIGION—THE SUMMER SESSION—THE COMING ELECTION AT THE COLLEGE OF SURGEONS.

LONDON, June 30, 1883.

SOME alarm has been caused by the report that an outbreak of cholera has occurred in Egypt. Later intelligence seems to show that many of the cases are rather cases of typhoid, and that no genuine epidemic of Asiatic cholera has taken place.

The Harveian Oration at the College of Physicians for this year was delivered on Wednesday last, 27th inst., by Dr. Habershon. After referring to the successive discoveries made by physiologists in different ages, Dr. Habershon spoke of Darwin and struck a different note to most of his predecessors when he maintained that though Darwin's facts are true, his deductions are not. Dr. Habershon is not alone in this. Many distinguished scientists do not accept Darwin's deductions as necessarily true. It is in fact but a theory. One of our weekly journals has, however, seen fit to call Dr. Habershon to account for his statements and also because his oration had a religious bearing. It is unfortunate that paragraphs of this description should promote the idea—already too prevalent amongst the public—that medical men as a body are opposed to religion. This popular fallacy is very widespread and at times gives rise to curious statements. Not long ago I heard a gentleman state that he only knew two medical men who took any interest in religious matters, although he was in a position which brought him in immediate contact with a large number of the prominent practitioners of London. A gentleman who was present at the time, immediately corrected him by naming half a dozen others, amongst whom was Dr. Habershon, long well-known for his activity in this direction. It is not long since Dr. Lauder Brunton produced a volume on "Religion and Science," and Dr. Mortimer Granville—who not long ago was conducting *The Lancet*—has just produced a volume on "Some Difficulties of Belief." Perhaps a more important example is that of the work done by Dr. Chance, who, on account of his great Hebrew scholarship, is serving as a member of the company of the revisers of the Old Testament.

The summer session is now drawing to a close, and doctors as well as their patients are discussing the great question where to go? Another indication of the season is seen in the publishers' lists, where books on spas are numerous. Within the last few days several books of this description have appeared.

The coming election (next week) of two Fellows to seats in the Council in the College of Surgeons promises to be an exciting one. The candidates are fairly equal as to merit, but the question of allowing country Fellows to vote by proxy or by voting papers is a burning one and will probably decide the election. The Association of Fellows of the College of Surgeons has brought pressure on the candidates to elicit their views on this important question. The justice of the demand made by the provincial Fellows seems self-evident.

SEA-SICKNESS AND ITS TREATMENT.—Dr. G. L. Walton, in an article on this subject (*Boston Medical and Surgical Journal*), argues against the value of bromide of sodium as recommended by Beard. In brief, his view is that in small doses the bromide is useless, in large doses it may be dangerous. The author brings very little evidence to illustrate his views and quite ignores the very large number of cases where the bromide does give vast relief.

THE INTERNES OF THE HOSPITALS—DO THEY DERIVE AS MUCH BENEFIT FROM THE SERVICE AS THEY SHOULD?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The clinical advantages given to the medical student of this city are inadequate, and not in proportion to the immense amount of clinical material at hand.

There is seldom a time in the course of his college life when a student without special advantages can get the opportunity of examining a case of disease at his leisure after it has been demonstrated by the professor in charge. Take for example a medical clinic. There are perhaps sixty or eighty students seated at various distances from the pit. A patient is brought in, the professor asks his questions, makes his diagnosis, outlines the treatment, and the case is sent out. There is usually no time for the students to ask questions or to examine the case for themselves. The case passes from their view, and they, if at all skeptical, do not feel sure that the diagnosis is correct. No explanation is given as to why certain remedies are given in preference to others just as efficacious. In my mind, it would certainly be of greater advantage to the student to have one case thoroughly explained to him, giving the why and wherefore of questions asked and drugs prescribed, and then allowing him to examine the patient. Under the present arrangement it is perfectly possible, as was some time ago stated in one of our journals, for a student to pass three years at a medical college and graduate without having been near or questioned a single sick person.

The question I wish to ask, is this: "If the clinical advantages of the college student are so slight, do the Internes of our hospitals receive as much advantage from their positions (won by hard work) as they have a right to expect? I do not think they do. In such a matter a great deal depends on the character of the interne. But leaving that out of consideration, I ask, "Do the attending physicians and surgeons give their staff as much clinical instruction as they should? I think all who have experience in such matters will agree with me that they do not. The clinical advantages of the hospitals are very great, and in some of them they are taken advantage of to a limited extent. But in how many of them is it customary for the attending physician or surgeon to give the staff regular clinical instruction? It is certainly a rare thing to have a short lecture delivered on an ordinary case during the daily rounds with the attending physician. It does not seem to occur to the majority of them that it is their *duty* to give such instruction as often as it is possible. It is true that once in a while a few remarks are made on a case which is interesting either on account of its rarity or its severity. But such things are of no practical value to the young man just starting out in practice.

All ordinary cases are dismissed with a few words and their treatment is relegated to the gentleman at the head of the staff.

And how often is such a young man capable of treating the majority of cases unless he have received previous instruction from some one of experience? Because a person is intelligent and has a mind well stored with facts, it does not follow that he can apply these facts to the best advantage without a certain amount of guidance. But there is another side to the matter of instructing the staff. It is their duty to at least appear to enjoy and appreciate whatever it may please the attending physician to tell them.

One cannot expect a teacher to persevere long if his audience plainly show that they are bored. This is a trait more often found in the junior members of the staff. They are very apt to think that they know everything worth knowing and that it is hardly worth while to take up their time telling them things of apparently so trifling importance. These are the men who, after they have been in the routine of practice for a few years, regret the neglect of such advantage in the past.

Even the nurses in our training schools receive instruction in matters in which every physician should be proficient, but in which no instruction is given.

I refer to making and applying poultices, fomentations, stupes, blisters, in giving sponge-baths without endangering the patient's condition. No instruction is given in cupping and leeching. Where is there a young physician who can show their patients' friends or relatives how to change a sheet so as to disturb the patient the least? It may be said that the physicians of this city do not need to know such things. This may be true in a measure, but not all people, even in large cities, can afford to have a trained nurse to do them.

But the majority of physicians, graduates of the city colleges, are scattered over the South and West, and a country practitioner who cannot show his country nurses how to do these things is certainly wanting in his duties toward his patients.

Such things, trifling as they may seem, are practically of more importance to the country practitioner than a thorough knowledge of pathological appearances at autopsy. For, how often is a post-mortem examination made in the country? Hospital men, at least, should know how to do all these things.

Instruction in giving anæsthetics is practically unknown in this city, strange as it may seem. In hospitals the junior-assistant usually administers the anæsthetic. He may or may not have given it before entering the hospital. He has usually never seen it given except perhaps in the amphitheatre. He has not the remotest idea what symptoms indicate danger, but he gradually gains this by a sad experience. Under the present system there is great danger to the patient and a great waste of time and anæsthetics. I think all operating surgeons will agree with the assertion that ether and chloroform should be administered by a person specially trained and appointed for that purpose, or at least by the senior assistant, who has had six months in which to learn something about it in a practical way.

Respectfully,

AN EX-RESIDENT.

MEDICAL ADVERTISEMENTS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The criticisms of THE RECORD upon the practice of religious journals publishing advertisements of secret medicines prompted me to write to the managers of the Western Methodist Book Concern, Cincinnati, O., in regard to the loss to the income of their publications which they have sustained by their refusing to publish medical advertisements of any kind. There are published by this concern four papers, viz., *The Western Christian Advocate*, Cincinnati, O.; *Northwestern Christian Advocate*, Chicago; *Central Christian Advocate*, St. Louis, and *Christian Apologist*, Cincinnati, O. From all of these papers such advertisements have been excluded for three years. In answer to my inquiry they state that they lose annually several thousand dollars, and that during the week that my letter was received they refused such an advertisement, for the publishing of which they were offered one thousand dollars. They add, furthermore, that to exclude such advertisements does not pay financially. Be it said, though, to their credit, the present management have no idea of departing from their present course. I only send you this item to show that to the rule there are some exceptions. It is to be hoped that the example of the few religious papers that refuse to advertise a disreputable business, will be followed by others. And once these journals practise consistency, a great check will be put upon the actions of those ministers who so flippantly endorse such medicines. Evidently there is a brighter day dawning for the honorable practice of medicine, and since, as a profession, we are trying to educate the laity above a belief in faith cures, patent medicines, etc., is it anything more than just that we should ourselves flee from the very appearance of evil?

Please allow me a few questions and thoughts upon the subject of medical advertisements in our own journals. Is it not a fact that to the readers of medical journals it has become almost obnoxious to see upon every page, and often half a dozen times on a page, such as this, "Beware of imitations," "Specify our make," and scores of other such admonitions? As though one were upon the brink of ruin and did not know it. Then the list of adjectives which appear in our advertisements compare favorably as expressing superlative worth with the laudations of the patent medicine vender. Do we not condemn patent medicines because they are advertised to cure almost every disease? And yet if we believe our own advertisers I can cure nearly all of the ills that flesh is heir to, with a few samples of mineral water, for instance, conditional only, as one professor says in his advertisement, "that it be taken in time." Can we with consistency, as long as we permit such things in our journals, say to the patent medicine advertisement in the religious paper, "Out, damned spot?" If these things are objectionable would not the manufacturers remedy the evil if the publishers declined to publish these advertisements? I would not presume to speak for any one else, but I would order A.'s pills just as often if he did not in his advertisement tell me in every other line to do so, and I would have as much confidence in their efficacy if a certain doctor had not said, "They are incomparably the best."

Please say to the manufacturer who is inclined to be exuberant in his praises of his goods, and to the physician who is already great enough to not need to advertise himself by thus publishing what may be nothing more than the pleasant effects of a good dinner—say to them, in the language of the boy upon the street, even though his language may not be strictly æsthetic, "Give us a rest."

T.

MILLBURY, O.

"A RARE CASE INDEED."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: An article under this title in the July number of THE MEDICAL RECORD, page 16, gives a case of extrusion of a fœtus after burial of the mother; and the commentator offers as a reason for this unusual occurrence either that the woman was buried in a state of suspended animation or that the fœtus was extruded immediately after death, leaving us to infer that uterine contraction is necessary to expel a fœtus. In legal medicine this interesting subject has received much attention, and perhaps the best remarks upon it are to be found in "Tidy," vol. i., pages 71–72 (Wm. Wood & Co.): "It is important to note that the development of gases in the body has been known to produce certain effects closely simulating vital acts. Probably gaseous distention is the usual cause of the occasional movements of a corpse, such as its turning on the side after it has been 'settled' in the coffin. Again, it is recorded that the pressure of the gases generated in the abdomen has been sufficient to force fæces from the bowels, urine from the bladder, and even a fœtus from the uterus (Case 73). Dr. Aveling records a series of six cases collected from medical literature, where delivery is said to have occurred spontaneously after death. In one of the cases it is stated that the child was born alive. It is certain that, as a rule, this spontaneous post-mortem delivery results from the pressure exerted by the gases developed in the abdominal cavity, although another explanation of this unusual occurrence has been suggested."

"Tidy" here refers to the theory of post-mortem contractions of the uterus.

The author also refers to a case of inversion of the unimpregnated uterus from the pressure of gases devel-

oped after death in the abdominal cavity. It is perhaps hardly necessary to add that the development of gases of decomposition may be very great within a few hours after death.

I am, sir, etc.,

W. H. TAYLOR, M.D.

NEW BEDFORD, MASS.

HOT WATER IN THE TREATMENT OF INFLAMMATION OF MUCOUS MEMBRANES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of June 16th, you quote, from the *Medical Age*, Dr. Ritzy's method of treating throat troubles with hot-water gargles. I have used hot water as a gargle for the past six or eight years, having been led to do so from seeing its beneficial effects in gynecology.

In acute pharyngitis and tonsillitis, if properly used at the commencement of the attack, it constitutes one of our most effective remedies, being frequently promptly curative. If used later in the disease, or in chronic cases, it is always beneficial, though perhaps not so immediately curative. To be of service it should be used in considerable quantity (a half pint or pint) at a time, and *just as hot* as the throat will tolerate. I have seen many cases of acute disease thus aborted and can commend the method with great confidence.

I believe it may be taken as an established fact, that in the treatment of inflammations generally, and those of the mucous membranes in particular, moist heat is of service, and in most cases hot water is preferable to steam.

All are familiar with its use in ophthalmia and conjunctivitis, as also in inflammations of the external and middle ear, and I feel confident that those who employ it for that most annoying of all slight troubles to prescribe for, viz.: a cold in the head, or acute coryza, will seldom think of using the irritating drugs mentioned in the books, nor of inducing complete anæsthesia with chloroform in preference to the hot-water douche. It is important to recollect, however, that to be effective in aborting this disease, it must be employed during the first stage of hyperæmia.

Nor is the urethral mucous membrane any exception to the general rule. Cases of urethritis and gonorrhœa are benefited or cured by its use when applied at the commencement of the inflammation. In the cure of gleet, I know of no other agent so often serviceable. Where there is no stricture, almost any case of gleet will yield in a short time to the use of the hot-water douche followed by mild astringents.

Keep in mind the principle of its curative action, viz.: the removal of hyperæmia, and the local sedative influence, and there will be found few cases of inflammation of mucous membranes where it will not, at some stage of the disease, promote a cure.

GEORGE R. SHEPHERD, M.D.

HARTFORD, CONN., July 12, 1883.

THE ANTI-VIVISECTION AGITATION.—A recent number of the *Contemporary Review* contains an article on the anti-vivisection agitation by the celebrated physiologist, Dr. E. DeCyon, and a reply by Mr. Hutton. The former gives several examples of wholly dishonest use made by the anti-vivisectionists of England of diagrams and garbled or distorted sentences from his "Physiologische Methodik." Of course that was to be expected, but it makes the deed none the less disgraceful. When a party profess to be actuated by such high and lofty humane views as do these agitators, it certainly is most contemptible that they should use such dishonest means to prejudice the community. Cyon also shows that of the two German leaders against vivisection one knew absolutely nothing about the subject, and the other was actually insane, as is now known, when he attacked physiological experimentation so bitterly.—*Weekly Medical Review.*

New Instruments.

PREMATURE DELIVERY FORCEPS.

BY STOYELL C. PARSONS, M.S., M.D.,

ATTENDING SURGEON TO NORTHEASTERN DISPENSARY, DEPARTMENT DISEASES OF WOMEN.

ON several occasions, having to use forceps in premature delivery, with the misfortune of having the instrument slip off four to six times during the necessary manipulation, I thought it necessary to try and overcome the difficulty if possible, and after a successful experience of three cases with my forceps, as illustrated by accompanying woodcut, I think I have accomplished my object.

Dr. Brickel's, being about the only one of any merit, are excellent where the head is in the inferior strait, but in the superior they are at times applied with great difficulty on account of the handles being comparatively straight or without the pelvic or cradle curve, as used by

Dr. Sawyer, of Chicago. On being applied and tension made, the power is exerted in the line of the axis of the superior plane, thus forcing the head against the pubis and retarding instead of aiding delivery. As before stated, tension being made, the blades do not hold securely on account of their having a slight outward flare at the tip, thus weakening them where the greatest power of assistance is required. To obviate these difficulties, I have continued the original curve of the fenestra inward to the tip so that the power of resistance is equal throughout the entire blade, and the head once fairly inserted within it, it is impossible for it to slip, except by breaking or bending in consequence of poor material. The handles I give the cradle or pelvic curve, thus enabling the operator to introduce the same with less difficulty and exert all tension or force in the line of the axis of the pelvic canal. My thanks are due to Messrs. Shepard & Dudley, 150 William Street, New York, for their kindness in furnishing designs.

The forceps weigh two hundred and forty-two grammes and are illustrated by the accompanying cut, which is executed one-fourth scale.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 7, 1883, to July 14, 1883.

BAILY, E. I., Colonel and Surgeon. In addition to his present duties to take charge of the office of Medical Director, Military Division of the Pacific, during the absence of the Medical Director. S. O. 64, par. 2, Military Division of the Pacific, June 30, 1883.

SUTHERLAND, C., Colonel and Surgeon, Medical Director, Military Division of the Pacific. Granted leave of absence for one month with permission to apply to the Adjutant General of the Army for extension of two months. S. O. 64, par. 1, Military Division of the Pacific, June 30, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon, Medical Director Department of the South. Leave of absence on surgeon's certificate of disability granted by S. O. 50, Department of the South, May 21, 1883, extended one month on surgeon's certificate of disability, with permission to leave the Department of the South. S. O. 156, par. 7, A. G. O., July 9, 1883.

PERLEY, HARRY O., Captain and Assistant Surgeon. Assigned to duty at Fort Pembina, D. T. S. O. 118, par. 1, Department of Dakota, July 5, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 14, 1883.

GREEN, F. H., Past Assistant Surgeon, granted leave of absence for one month.

GRIFFITH, S. H., Past Assistant Surgeon, granted leave of absence for one month.

HUDSON, A., Medical Inspector, Assistant to Bureau of Medicine and Surgery, granted leave of absence for one month.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 14, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 10, 1883...	1	13	42	4	81	20	0	0
July 17, 1883.....	0	18	38	4	68	23	0	0
Deaths.								
July 10, 1883.....	1	6	12	4	19	13	0	0
July 17, 1883.....	1	10	7	4	21	16	0	0

MEDICAL PRACTICE IN ENGLAND.—The *Student's Journal* says: "There are great complaints in professional circles, both East and West, as to the scarcity of money. I hear that many of the West End physicians find their incomes this year very seriously reduced in consequence of the general depression in trade and the straitened circumstances of many of the landed proprietors of the country. Every one is obliged to be content with smaller fees, and unfortunately there are fewer of them."

AN ANÆSTHETIST is the latest medical title. It has been bestowed upon a medical officer of the Chelsea Hospital. An anæsthetist may be described as a person who excites no feeling.

THE TRICHINÆ IN CHICAGO PORK.—In the present agitation over trichinous pork and adulterated lard, the investigations made some years ago by Dr. W. T. Belfield, and Mr. H. F. Atwood, of Chicago, may be cited. They examined the pork in the various packing-houses of that city, and found trichinæ present in eight per cent. of the specimens, the parasites averaging about 20,000 to the cubic inch. These gentlemen believe that infection of human beings with trichinæ is very much more common and less injurious than is commonly supposed. They have made the interesting discovery that a small portion of sulphurous acid dissolved in the brine in which hams are pickled will kill all the trichinæ.

NERVOUS CONSTIPATION.—In nervous constipation the *Rivista di Bologna* recommends the following pill:

℞. Pulv. ferri sulphatis ..... 0.10 (gr. 1½)
Aloës soccotrinæ..... 0.05 (gr. ¾)
Ext. belladonnæ..... 0.005–0.01 (gr. $\frac{1}{12}$–$\frac{1}{6}$)

From one to four of such pills may be taken during the day. Should intestinal atony be suspected, the extract of belladonna is to be replaced by ext. nucis vomicæ, 0.005–0.01 (gr. $\frac{1}{12}$–$\frac{1}{6}$).

SUICIDE IN EUROPE.—According to Legoyt, the number of suicides to each million inhabitants in the various countries of Europe is as follows: Germany, 261; Denmark, 257; Switzerland, 215; France, 160; Austria, 121; Belgium, 87; England, 69; Holland, 45; Russia, 30; Italy, 37 (27?); Ireland, 21; Spain, 17. In almost all of these countries suicide by strangulation is preferred. In Germany, of 100 cases of suicide, 64 were cases of strangulation; in Austria, 47; in Hungary, 60; in Denmark, 77; in Russia, 73. Second in favor to strangulation stands drowning, a method, however, practised less in France than elsewhere. Poisoning is not employed much except in Ireland and Italy. Suicide by means of the gas from charcoal occurs more frequently in proportion in France, and especially in Paris, than elsewhere.—*Gior. Int. delle Scienze Med.*

WINTER AT CATANIA.—The advantages of Catania as a winter resort have as yet received but little attention, although the climate is by medical climatologists claimed to be one of the finest. Dr. Ughetti recommends the place on account of its uniform temperature (mean for the year, 18.5°, mean for the winter, 13.1°), with its slight and graded oscillations, its freedom from winds, and because of the number of serene days without rain, fog, or snow. The atmospheric pressure also varies but little (from 768 to 750).—*Gior. della Soc. It. d'Igiene.*

THE PHYSIOLOGY OF SLEEP.—M. Vulpian in his lectures upon the vaso-motor system seems to have demonstrated that the present popular theory of cerebral anæmia causing sleep is not correct. He argues first that insomnia is a frequent attendant of general anæmic conditions. The idea that drowsiness after meals is caused by derivation of blood to the stomach and intestines is disproved, he says, by looking at the turgid countenance and throbbing temporals of the sleeping gourmand. Vulpian was never able to produce sleep by compressing or ligating arteries that supply the encephalon, nor by galvanizing the cervical sympathetic, and thus producing cerebral anæmia. He examined the membranes of the brain of numerous animals whom he had placed under anæsthetics or hypnotics. In none of them was there any notable change in the vascular supply. He concludes that the vascular supply has nothing to do with the causation of sleep; that any slight anæmia which may accompany this condition is a result, not a cause. M. Vulpian furnishes no substitute for the theory he destroys. He simply considers sleep to be a *habit* of the nervous system of relapsing into a state of torpor.

The most generally accepted theory now is probably that of Prof. Preyer.

THE DEATH OF THE REV. CHAS. W. CALHOUN, M.D.—Rev. Charles W. Calhoun, M.D., a medical missionary of the Presbyterian Church, stationed at Tripoli, Syria, died about three weeks since at Shevcifat, Mt. Lebanon. He was the only son of the late Rev. Dr. S. H. Calhoun, and was educated at Williams College, Union Theological Seminary, and Bellevue Medical College. He was a native of Syria and an intimate acquaintance with the Arabic tongue gave him easy access to the hearts and homes of the people. About a year since he was subjected to a series of vexatious persecutions from the Turkish authorities at Tripoli, and since then he has spent most of his time travelling among the villages. One of the insults heaped on him was the removal of the sign on his office. The American Minister at Constantinople, Gen. Wallace, was requested to demand redress for this act from the Turkish Government, and almost at the same time with the news of his death came a telegram stating that an apology had been demanded.

HABITUAL CONSTIPATION.—In the *British Medical Journal* Dr. J. Mortimer Granville offers three prescriptions which he claims are generally applicable to the treatment of all the well-recognized forms of habitual constipation. He sees three forms of the disease, one due to deficient peristaltic action, one due to deficient

glandular secretion, and one due to interruption of the habit of periodic evacuation. For the relief of the first form he prescribes:

℞. Sodæ valerianatis..... gr. xxxvj.
Tincturæ nucis vomicæ..... ♏. lx.
Tincturæ capsici..... ♏. xlviij.
Syrupi aurantii..... ℥ iss.
Aqua .....ad ℥ vi.

M. Ft. mistura. Sig.—Tablespoonful in water half an hour before meals.

For the second form:

℞. Aluminis..... ℥ iij.
Tincturæ quassiæ..... ℥ j.
Infusi quassiæ..... ℥ vij.

M. Sig.—Dessertspoonful after meals.

For the third form:

℞. Ammonia carbonati..... ℥ j.
Tincturæ valerianæ..... ℥ j.
Aquæ camphoræ..... ℥ v.

M. Sig.—Take ounce as directed on arising from bed.

Dr. Granville insists upon a regular hour for going to stool, at least to make an effort at evacuation. He proposes to establish in this way the normal habit, and thinks aperients in habitual constipation do no good. One naturally inquires, when reading the above, what is to be done if two or even all three of these forms are united.

Facts for Our Religious Weeklies.—Prof. A. B. Prescott says that the use of patent medicines without a knowledge of their composition does injury to the health of the people, for the following reasons: 1, they may, and in fact sometimes do, contain powerful or poisonous articles unsuspected; 2, they always may be, and often are, inert, and become a false reliance to the neglect of other and due measures in the care of health; 3, they are liable to be changed in composition, so that any experience of their effects as they are purchased at one time is not conclusive as to the same named articles purchased another time; 4, it is submitting health to the treatment of a distant and irresponsible stranger, and learning to hazard health in an apparent game of chance; 5, they are trusted to act as antidotes to disease in the sense in which no medicines can antidote disease; 6, they favor excessive recourse to medication and thereby increase the resort to physicians.

The Treatment of Acute Goitre with the Biniodide of Mercury.—Dr. Mouat, of Bengal, was the first to notice specially the value of the use of biniodide of mercury in combination with the rays of the sun in the cure of goitre. His practice was to use the mercury as an ointment of three drachms to a pound of lard; a portion was rubbed in an hour after sunrise, the patient afterward sitting with his goitre well exposed to the sun as long as he could endure it. After this a fresh layer of ointment was carefully applied, and in ordinary cases a single application was sufficient. Of the value of this treatment in India there can be no question. Surgeon-Major Albert A. Gore, reports (*Dublin Journal of Medical Science*) thirty cases which he successfully treated in this way.

Professorships at Cambridge.—Dr. Michael Foster has been elected to the newly established Chair of Physiology, at Cambridge. Dr. Alexander Macalister, of Dublin, was elected to the Chair of Anatomy, and Professor Humphrey has been appointed to the Chair of Surgery.

In Phthisis and Bronchitis, Renzi and Rimuno report good results from the inhalation by spray of iodoform dissolved in turpentine.

Phenoresorcin is the name of a mixture composed of carbolic acid sixty-seven per cent. and resorcin thirty-three per cent. The addition of ten per cent. of water makes a fluid which can be diluted p. r. n., making a powerful antiseptic wash.

Something Worth Fighting for.—A State board of examiners, the greatest need of the medical profession in the State of New York—a "mixed board" the only efficient one attainable under present conditions.—*Buffalo Medical and Surgical Journal.*

The Poisonous Properties of the Castor Bean.—Dr. R. S. Harden, of Waverly, N. Y., writes: "Upon reading the account of poisoning from eating castor beans, in The Medical Record of June 30, 1883, I was reminded of my own (personal) experience with the bean. While a medical student at Bellevue in 1872, our professor of materia medica, Dr. McCready, picked a handful of the beans while passing through the hospital grounds and during his lecture upon cathartics he passed them around among the class, facetiously remarking that if any of us were in need of physic we could eat some of them. Not requiring a cathartic, but simply out of curiosity, I ate one bean, the results were very *surprising* and *alarming*. I vomited and purged violently all night, and purged during most of the next day, being so extremely prostrated that I was very much alarmed for fear of a fatal termination of my experience with the professor's innocent castor beans."

Our Alarmist Contemporary, *The Lancet*, makes the extraordinary statement that "it would be difficult to imagine a more powerful apparatus for conveying disease than a book." Our esteemed but over-earnest contemporary goes on to picture the circulating library as a chamber of insuppressible horrors, and borrowed books as containing the promise and potency of the most deadly contagions. The question follows, Is it better to live illiterate or die of the measles, whooping-cough, chicken-pox, mumps and all the other ills to which flesh is heir, and circulating libraries are testators to? If the *Lancet* had only taken the trouble to give its alarmed imagination a rest, and had consulted some of the facts, it would have found that the question of contagion by books has been carefully studied, in this country at least, and very little made out of it. The *Lancet* has got into a condition of sanitary erethism, and is bound to make its readers uncomfortable. We are reminded of *Punch's* verses, which might very well be directed against

"THAT DREADFUL JOURNAL.

"It warns us in eating, it warns us in drinking,
It warns us in reading, and writing, and thinking;
It warns us in foot-ball, foot-race, eight-oar "stroking,"
It warns us in dancing and cigarette smoking;
It warns us in wearing red socks and shampooing,
It warns us in taking champagne and canoeing,
It warns us of drains in our snug country quarters,
It warns us of fever in mineral waters,
It warns us in everything mortal may mention,
But—what gives rise
To but little surprise,
Nobody pays it the slightest attention."

The last is certainly wrong, as regards our valuable contemporary, however, since its views are always widely quoted, being always forcibly put forth.

In Pruritus of the Genital Organs, Scavenzio recommends local hypodermic injections of morphine.

Beer in the Paris Hospitals.—The *Progrès Médical* (June 9) criticises a rather arbitrary circular which M. Quentin, the Director of the Assistance Publique, has just issued to the directors of the Paris hospitals, with instructions to communicate it to the medical officers. In this he declares that the consumption of beer in the hospitals has for some time past so increased as to become a very serious charge upon the budget and deranging its equilibrium. This abuse, as he terms it, he can no longer permit, for beer he declares to be neither a food nor a medicinal agent, and therefore it must from this date cease to be furnished as one of the current articles of diet, and only become procurable by means of exceptional prescriptions of the *chefs de service* under the surveillance of the Central Administration. The *Progrès* disputes the assertion that beer is neither food nor medi-

cine, and states that the medical officers find it of great value in the treatment of disease, and regards it as somewhat surprising that the Director should have issued this decree (which really means almost entirely stopping the use of beer) merely for economical reasons, without consulting the medical body as to its propriety. If economy is the object in view, there is said to be ample means of accomplishing it in the hospital administration, which is far too numerous. The hospital physicians have also signed a protest against the withdrawal of the beer. Nevertheless, it is abundantly demonstrated in America that beer is not an essential to a diet list of a hospital.

Successful Operation for Strangulated Inguinal Hernia on a Man Eighty-one Years Old.—Dr. H. S. Hendee, of Louisville, N. Y., writes: "On June 6th I was called to an adjoining town to visit a well-known citizen, Mr. A. A——. Found him suffering from strangulated hernia, and had been in that condition for fifty hours. At once attempted its reduction, but failed. Gave chloroform, with the hope that under its influence parts might relax and reduction follow, but with the intention if reduction failed, to operate. Dr. C. P. Kirby of this place was called, and gave efficient aid. After making proper, but ineffectual efforts to reduce the hernia, the operation was at once commenced. The opening was made to the bowels and ring, with very little loss of blood, not exceeding half an ounce. The bowel was highly discolored. Dividing the ring was but a moment's work. The bowel was carefully sponged and returned to its place. Three deep ligatures united the wound. Carbolic acid lotions were applied; morphine internally. By June 20th the patient was practically well. The points which make this case worthy of note are, first, the age; second, the time which elapsed after the strangulation and before the operation, showing, as it does, that age and lapse of time need not deter the surgeon from making the operation."

Politics and Medicine.—The Dayton, O., Board of Health has discharged the Health Officer, Dr. Thos. L. Neal, and appointed a vigorous Democrat, Dr. A. H. Iddings, in his place. The Dayton *Journal* adds that "it was the deliberate opinion of the Board that the sanitary condition of their party demanded a Democratic doctor."

The American Medical Man Abroad, and how He is Regarded.—A correspondent of the *Cincinnati Lancet and Clinic* writes home regarding the status of American medicine abroad, giving perhaps a rather one-sided view of it. He says: "They know one thing at least, and that is that medical diplomas can be bought in our country, and that almost every American has one of them concealed somewhere in his inside vest-pocket. 'How are the *Doctors Philadelphiæ* progressing?' I heard one of them remark to a friend of mine the other day. 'Finely,' he said, 'the American Government issues them to us as passports, and they thus serve as an easy means of identification, besides serving as a medical diploma.' 'You don't say so,' he replied, and probably went off to communicate the fact to Bismarck. They get the idea that bushel loads of these bogus medical diplomas, or D. P. (Doctor Philadelphiæ), as they call them, are sold to the highest bidder, that most of our colleges engage in traffic with them by the fact that these quack professors advertise their institutions in the German papers, probably intending to attract the back-door German candidates to our shores. No wonder their faith in our colleges is shaken somewhat; no wonder they look with suspicious eye on the title of M.D. (Genus Americanus). Here is another sample of their thoughts. One of the most celebrated gynecologists of this city thus addressed the class one morning: 'Gentlemen, I present you a case of abortion of not unfrequent occurrence in this part of the country, our American neighbors, however, annually have six thousand abortions, besides a large number that never reach publicity.' The German students look amazed and surprised, and if perchance an American is present, he is eyed to see how an abortionist looks. Is the medical profession in America so steeped in wickedness that a German professor allows his students to infer that every practitioner practises abortions, and that it is just as common a thing to have an abortion as a broken leg or a case of tuberculosis, for instance?

Another Case of Transposition of Viscera.—Dr. G. Frank Lydston, of Chicago, sends us the following account of a case of transposed viscera: "J. M——, twenty-four years of age, barber by occupation, consulted me a short time since with reference to a slight attack of bronchitis, and stated casually that his heart was 'on the wrong side.' On examination, I found that his statement was correct. The heart occupies precisely the same relative position upon the right side that it ordinarily does upon the left, the apex being in the right fifth intercostal space. There are no evidences of cardiac hypertrophy, and the valves are apparently perfectly normal. The chest is perfectly symmetrical, there being no more than the normal disparity of measurement of the two sides. The lungs are normal, and no causes of cardiac displacement involving either an increase of weight or extraneous pressure are present. No dyspnœa is complained of, and the patient is to all appearances in perfect health. At my first examination, he had just climbed several flights of stairs, in preference to waiting for the elevator, but was not at all inconvenienced thereby. The abdominal viscera are in their normal positions, a point to which I will call especial attention, inasmuch as such cases are usually accompanied by a transposition of the liver and spleen. Niemeyer states that in dextro-cardia the liver usually occupies the left hypochondrium and the spleen the right. Taking the various features of the case into consideration, I think we are warranted in the conclusion that it is an instance of a quite rare anomaly, 'congenital dextro-cardia.' Pathological displacements of the heart are, of course, not infrequently seen, as the heart is a very movable organ, and slight causes may suffice to displace it, but the present case is certainly quite rare."

Sir John Hill again.—A correspondent informs us somewhat dogmatically that the epigram on Sir John Hill, quoted by us recently, was not written by Garrick, but by Samuel Foote. Our authority was that of Mr. John Timbs, and we shall have to abide by it until a better is given.

Sir John Hill was one of the quasi-charlatans of the eighteenth century, a man of immense ability and industry, but of a waspish temper and irrepressible impudence. He was consequently the victim of many epigrams. A "Hilliad" was even written, in which Sir John was described as

> "A wretch devoid of sense and grace,
> The insolvent tenant of uncumbered space."

Another witty individual, who had been called "a wooden-headed booby" by the distinguished doctor, retorted with the following verse:

> "The worst that we wish thee for all thy vile crimes,
> Is to take thy own physic and read thy own rhymes."

Some other friendly poet caught up the last and wrote the following:

> "No! let the order be reversed,
> Or else unlashed his crimes;
> For if he takes his physic first
> He'll never read his rhymes."

The Reward of a Good Action.—Those who do not believe in a readjusting hereafter should read the story of the good doctor of Lyons: As Dr. Monnet, the good man referred to, was passing along the streets one cold day last January, he saw a drunken man fall down and seriously injure himself. The benevolent physician hurried to the fallen and stupefied man, helped him up, and

led him to a neighboring drug store, where he bound up his wounds and gave him a soothing potion. Scarcely had he finished his work when the drunken man turned and struck him violently in the face. The doctor left in disgust, but as he was hurrying on his way the druggist came running after him with a bill of one franc and eighty centimes for the medicine given to the patient. The doctor refused to pay it and went his way. Some days after the doctor received two official letters, one calling on him to pay the druggist's bill, the other summoning him to court to testify with regard to his drunken patient. The doctor, who was a busy man, neglected both letters. He was soon after visited by a bailiff and compelled to pay a fine of forty-eight francs and also for the prescription, a total of forty-nine francs eighty centimes. Worse than all, the scandal aroused by the visits of the police so damaged his reputation before a prospective father-in-law that he missed "un beau marriage."

THE BACILLUS TUBERCULOSIS may have killed many men—it has made two, Koch and Spina.

BACILLUS LEPRÆ.—Cornil has recently demonstrated the presence of bacilli in leprous tissues, and announces that he has found a new staining reagent by which the decomposition bacteria can be differentiated.

GERMAN VS. FRENCH SURGERY.—The *Medical and Surgical Reporter* calls attention to the alleged decadence of French surgery and quotes Verneuil's refutation thereof as follows: "If we appear to have thrown back operative surgery to the second rank, this has been in order to advance surgical therapeutics into the first rank. If we have shown but little eagerness to extirpate cancers of the larynx and uterus, to excise the œsophagus, the pylorus, or the lung, to tie the aorta, etc., this has been because our Gallic good sense has enabled us without difficulty to foresee the inevitable destiny of these extravagant vivisections, and that it appears to us of no utility boasting to-day of that which will be rejected to-morrow. If in our surgical wards we greatly hesitate to transport the results obtained in laboratory experiments, that is because we do not assimilate man with batrachians and rodents, or even with the mammalia, the most elevated in the animal scale." For all this, the Frenchman does not make out his case. The chief contributions not only to operative surgery, but to surgical pathology and therapeutics, have come in late years from other countries than France.

A METHOD OF RENDERING THE SKIN INSENSIBLE IN OPERATIONS WITHOUT CHLOROFORM.—M. Jules Guérin read a note at the Académie des Sciences upon a method of rendering the skin insensible in those operations which do not admit of chloroform by inhalation, and cited a case in which he had employed it to advantage. A lady, aged sixty years, consulted him three months ago for a tumor in the right breast of eight years' standing, which, on examination, proved to be scirrhus. The general health was bad, bronchial and cardiac troubles were manifest, and the kidneys were not in a very satisfactory condition. However, the operation was urgent. Chloroform having been considered dangerous, M. Guérin applied around the tumor a circular layer of Vienna paste, limited by a double band of diachylon. At the end of twenty minutes the caustic was removed, leaving in its trace a black ribbon-like line. The knife was then applied, and the tumor removed without the patient feeling the slighest pain, and who did not seem to be aware of the operation. The results were all that could be desired.—*Medical Press.*

THE TREATMENT OF WARTS.—Vidal recommends bandaging the wart-covered hands in flannel and green soap. After a number of applications the warts become softened and can easily be removed.

THE SOUND IN THE DIAGNOSIS OF GASTRIC DISEASES.—Leube calls attention to the very vague methods now in use for determining the different forms of gastric trouble. He recommends the use of the soft sound for the purpose of more careful investigation. A healthy stomach should be completely empty seven hours after a moderate meal. By the sound we can determine whether it is really empty at this time. Specimens of the gastric juice can also be obtained, and its acidity tested.

CHRONIC CONSTIPATION.—Cascara sagrada, in doses of twenty minims three times a day, is said by many observers to be very efficient in the treatment of obstinate chronic constipation.

A SUBSTITUTE FOR IODOFORM IN THE TREATMENT OF WOUNDS.—Professor Ferd. Petersen, of Kiel, claims that zinc oxide is just as good as iodoform in the treatment of wounds, that it is not so poisonous, and is cheaper.

THE TITLE OF DOCTOR AND M.B.—Dr. N. O'D. Parks, of Ashton, R. I., writes: "I trust you will pardon me again troubling you to make more plain how preposterous is your London correspondent's contention. The sole ground on which the right to the title of doctor is claimed for the M.B., is that it is a University degree. On that ground, above all others, the claim is most untenable. Nobody ever hears, for instance, of a B.D. or LL.B. arrogating to himself the right to be called doctor, and there is no valid reason why a special privilege should be conceded to an inferior degree in medicine which is not accorded to the corresponding degree in law or divinity, both of which take precedence of the medical degree. There is one way, and one only, in which an M.B. can acquire the right to the prefix Doctor, and that is by proceeding to the higher degree of M.D."

CONCERNING THE REGISTRATION OF REGULAR PRACTITIONERS AND THE MEDICAL REGISTER.—A correspondent sends us the following: "In your issue of July 7th, it is stated that, 'In what for distinction's sake may be called the Physicians' Medical Register for 1883–84, a list of only 2,684 names is given, which *number represents* the *regularly educated* physicians in *affiliation* with *regular* medical societies (italics mine). The remainder are composed of homœopaths, eclectics, and nondescripts.' The above statement is incorrect for the following reasons: First, it mentions the Physician's Medical Register, as if its list were an official one, which, as I understand, it does not claim to be; second, the list does *not include* all regularly educated physicians in affiliation with, and in good standing in the Regular Medical County Society, or the Academy of Medicine; third, it is controlled by a 'private organization,' claiming the privilege of permitting or refusing registration to whom it will—the latter in cases where, to the best of my knowledge, it has not even attempted to allege, much more to prove, as cause for such refusal anything derogatory to the character or ability of such applicants for registration."

TO STOP HICCOUGH—Dr. W. E. Shaw, of Cincinnati, Ohio, writes: "I noticed the item by Dr. Martin Burke, in THE RECORD, of the 30th ult., 'To Stop Hiccough' by compression over the lower ribs. I have used compression successfully in quite a number of cases of persistent hiccough. The idea is not original, but was given me by my preceptor, Dr. W. P. Kincaid, of New Richmond, Ohio, about 1870. His method was to place the tips of the fingers of both hands in position of complete supination against the abdominal muscles, at the lower and outer junctions of the epigastric with hypochondriac regions. With the finger-tips in this position, firm and very gradual pressure was to be made backward and upward against the diaphragm. This pressure should be continued for some little time after the diaphragm has ceased its spasmodic contractions, when the fingers should be very gradually withdrawn."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 4 NEW YORK, JULY 28, 1883 Whole No. 664

Original Articles.

THE STATUS OF PROFESSIONAL OPINION AND POPULAR SENTIMENT REGARDING SEWER-GAS AND CONTAMINATED WATER AS CAUSES OF TYPHOID FEVER;

WITH ALLUSIONS TO A PAPER BY DR. ALFRED L. CARROLL UPON THIS SUBJECT.[1]

BY GEORGE HAMILTON, M.D.,
PHILADELPHIA, PA.

IN the discussion following a lecture upon this subject before the College of Physicians, March 7th, by the writer, the pre-eminent sanitary engineer, George E. Waring, declared "that the sewer-gas theory in regard to typhoid fever was, in the opinion of sanitarians, exploded." This declaration is in opposition to the teaching and recommendations of not a few engineers, who insist "that every effort should be made to exclude the gas from dwellings, regarding it as the general, if not the sole cause, not only of typhoid, but also of scarlet fever and diphtheria." This doctrine and these recommendations are in accord with the opinions, and have gained the support of a large majority of physicians. Many professors and editors of medical journals coincide with this view, and successfully impress its alleged correctness upon the minds of the inexperienced student and practitioner. Recently there appeared in a medical journal a paragraph from a somewhat prominent physician to this effect: "Is it not surprising and incomprehensible that there can yet be found physicians who deny the agency of sewer-gas in causing typhoid fever, diphtheria, and scarlet fever?" When it is stated that the writer of this quotation is one of the most positive in regarding sewer-gas as the effective agent in giving origin to the diseases named, may we not imagine another and greater surprise when he learns that this cherished and popular theory is exploded!

The paper upon sewer-gas, by Prof. Frank H. Hamilton, published some months ago in the *Popular Science Monthly*, with its numerous quotations, cannot be regarded as antagonistic to the opinions heretofore and at present held by many physicians, sanitarians, and the public generally. The special object of that paper was, in fact, to devise more reliable measures to exclude from houses this asserted source of disease; and, to accomplish this object, scientific plumbing, with improved apparatus erected in an annex, outside of the residence, was recommended. Efforts to exclude the gas are unceasing up to the present moment; neither is this strange, in view of what has just been stated. Whether the typhoid, the scarlatinal, or the diphtheritic germ, or some special quality of the gas itself, dependent upon peculiar substances finding entrance to the sewers, and subjected to various degrees of warmth and moisture, be the supposed noxious agents in question, is immaterial; for, practically, to admit the gas is to admit one or all of these agents; to exclude the gas is to exclude them. Attempts have recently been made to underrate the agency of sewer-gas in causing typhoid fever and other diseases. Efforts in this direction are, doubtless, made by those who frankly confess that the reports of the Board of Health of this city, New York, and elsewhere, are strongly in opposition thereto. Nor is this all; for a large majority of practitioners, who have had the most frequent and abundant opportunities to observe the origin, development, and progress of typhoid fever, either withhold their assent to the current views upon this subject or positively deny that sewer-gas is the sole cause of this fever, or that it exceeds all other agencies, combined, in its production.

In this connection, does it not seem passing strange that, while the Trousseaus, the Niemeyers, the Murchisons, the Bristowes, the Flints, the Jacksons, and many others of similar experience and capacity, entertain doubts in regard to certain points pertaining to the origin of typhoid fever, and express their opinions in relation thereto with calm, philosophic, commendable reserve, many others, of different qualifications and temperament, find no difficulty of this kind, but, on the contrary, armed *cap-à-pie*, are always ready and eager to solve any question in regard to this subject? Unfortunately, these attempted solutions are too often merely bold, positive assertions, having no real basis of support, as is exemplified in the declaration by some, "that the families located in the wealthy and fashionable parts of Philadelphia and New York, are most liable to attacks of typhoid fever;" while the reports of the Board of Health of both cities show, on the contrary, that the suburbs exhibit by far the largest number of cases. This accords perfectly with the testimony of the late distinguished Professor, John K. Mitchell, quoted in my paper of the 7th of March, who, in consultation, informed the writer and the late Dr. Louis P. Gebhardt, "that he seldom saw cases of typhoid fever except on the outskirts of the city," where water-closets were scarcely known. One of the chief embarrassments of those who would fain be wise above that which is written, is to account for the greater prevalence and fatality of this disease in the country, and to avoid this difficulty, *coûte que coûte*, a reason for this must be given. To escape the dilemma in which they are placed, the drinking-water in the country is declared to be contaminated from the adjacent or remote privy. Now, this assertion should, if believed, inspire far more dread than the sewer-gas theory ever did, even in its palmiest days, long before the recent decree that it had been exploded was announced. What must now be the state of mind of the laborious farmer and family in reflecting that to his own negligence or stupidity is he indebted for this sad condition of his household? But the mischief does not end here; for what, it may rationally be asked, is to become of the thousands upon thousands of our citizens who, every summer, gladly visit the country and seek boarding with the farmer, or select for a season the accommodations furnished by cottages or hotels, many of them for the express purpose of escaping, as they declare, the heated and impure air of the city, and the contaminated water of the Schuylkill, receiving, constantly, as it is said, an immense amount of impurity from Manayunk, and many other points nearer to Fairmount? As is well known, not a few of the country people, on visiting the city, alarmed by the exaggerated reports of the condition of the water, abstain as far as possible from its use. But admitting the supposition, and it is nothing more, to be true as to contamination of the water in the notably beautiful rolling country of the counties around Philadelphia, how are we to explain the fact that, at uncertain intervals, a severe epidemic will suddenly appear, fever sometimes, dysentery at other times, and will just as suddenly disappear, and neither of these

[1] See MEDICAL RECORD of June 9, 1883.

diseases again be seen to any extent for one or several years; precisely as has often occurred in this city and elsewhere? To suppose that the water has thus suddenly changed from purity to impurity, and again as suddenly to purity, without perceptible or conceivable cause, either by the family physician or the family, is simply absurd.

Such a statement as was made in the discussion alluded to, regarding the condition of what were termed country towns in New England, can have but limited application, and is completely at variance with the contents of a letter from a prominent physician in a New England State, who, after inquiry in reference to outbreaks of typhoid fever, had replies from about fifty practitioners in that State to this effect, that the rural sections suffered by far the most from epidemics of typhoid fever. Any one who has travelled over the rural sections of New England could not have failed to observe the generally good condition of the farms, whatever he may have noticed of an exceptional character in some places. But why go from our own city or vicinity? Have we not in this city, or within an hour's journey, numerous factories and densely peopled districts, notorious, when compared with the country, for their filthiness; with cesspools and innumerable privies almost in contact with dwellings; and, in many cases, from the porous nature of the soil, filled to repletion, thus affording every opportunity for the contamination of the water in comparison with the country?

To show how delusive plausibly written accounts of the origin and spread of typhoid fever may be, let the following suffice: A woman, after nursing a relative during several weeks, returned, after the death of the patient, to her own residence, distant three miles. In a few days she was prostrated with typhoid fever, the disease of the relative. In succession one after another was attacked until four out of seven members of the family were down with the disease, one death ensuing from perforation. In the discussion of the paper one of the speakers thought there could be no difficulty in accounting for the attacks of the last three patients, as the dejections from the bowels of the first patient were (probably) cast down in such way as to admit of drainage into the drinking-water, and that thus the typhoid germs were received into the stomachs of those last attacked. But, unfortunately for this solution, the drainage descended from the source of the water to the outhouse.

In another family of eight persons, quoted in the lecture of March 7th, seven were attacked with the fever, all of them dangerously, except a colored servant. As in the former case the disease did not originate upon the premises. A son had been sent into Maryland—distance forty miles—and after remaining there several weeks was brought home, affected with typhoid fever; and in succession his two brothers, two sisters, and last of all, his father and the servant were attacked. The dwelling was upon the slope of a hill, and, as in the former case, the drainage descended from the water in the direction of the outhouse; so that contamination of the water in either instance was impossible. Typhoid and scarlet fever, diphtheria and dysentery may not, under favorable conditions, be contagious; but under opposite conditions, as when these diseases are malignant, and the patients crowded together—for example, three in the same room—as occurred in the family just alluded to, they are regarded by an immense majority of the most able, unprejudiced and experienced physicians as eminently contagious.

Colonel Waring, to his credit be it said, was commendably conservative in the discussion, not disposed to be dogmatic, and, in regard to this special point, said that "the literature of the subject *seems* to prove that typhoid fever in the country is due to drinking-water which has become contaminated," knowing, doubtless, full well that a score of probabilities are powerless when confronted by a single irrefutable fact.

To revert for a moment to sewer-gas, it appears from the remarks of one of the disputants to be now placed in a worse position than ever; for while it is admitted to be the *vehicle for conveying typhoid germs, when* it contains them (?), it is also declared to be "the most potent cause of the typhoid state." The importance of this statement will at once be appreciated when we call to mind that the typhoid condition is the almost invariable concomitant of the latter stages of nearly all dangerous and fatal diseases, whether acute or chronic. During the discussion repeated appeals were made on behalf of cleanliness. But who ever heard of any one, who had the least regard to the amenities of life, opposed to cleanliness? for is it not said to be "akin to godliness?"

The criticisms by Dr. Alfred L. Carroll upon my lecture of March 7th, published in THE MEDICAL RECORD of June 9th, are, the writer thinks, rendered in great measure nugatory by certain uncontroverted and incontrovertible facts above stated; yet special notice will now be taken in reference to some points in the critique.

The diagnosis of typhoid fever is declared by Dr. C. to be unsettled. But why so? Is it because it has been known to appear suddenly upon a mountain-peak in Tennessee or Western Virginia, in their almost pristine condition, far removed from sewers, or "the walled-up and leaching privies of cities or of filthy villages," where some may say it should not have appeared; or, on the other hand, in the filthiest of cities in Asia and Africa it rarely appears, despite the filth and stench for which they are noted. The diagnosis depends upon no contingent, exceptional features in its history. Who that has ever read Louis, Andral, or Chomel, or Bartlett in our own country, and, in an especial manner, the works of that master-mind in medicine, Austin Flint, Sr., could say that the diagnosis of this disease is unsettled? Like very many other affections, either from idiosyncrasy, or complications, doubts may arise; yet this militates not against its normal aspect, one of most singular and pronounced character, so that he who is familiar with the disease will incur slight risk of a mistake in diagnosis. Error as to frequency and fatality in town or country is impossible, if statistics are consulted.

Dr. C. asserts that sanitarians have not ascribed prominence to sewer-gas as a cause of typhoid fever. The facts above stated on this point prove the contrary. According to Dr. C. a majority of cases of this disease have been *accurately* traced to contaminated food and water; yet in my own extensive experience not one such case has (to my knowledge) ever occurred, and those reported are probably in the same predicament as those alluded to in the discussion as referable to contaminated water. The term sewer-gas is said to be misinterpreted, but is it not just as definite in signification as the terms spring-water, sea-water, river-water, mountain air, etc.? Next it is declared that "the filth of the country is atrocious compared with that of the city, and that for one source of filth in the city there are three in the country; and that one prolific cause of this may be found in the numerous unventilated vaults." In reply to this sum of abominations of the country and villages, compared with a city, the writer must declare that, after ten years of practice in the country, he has seen nothing that could present the shadow of a parallel to the statement just made. On the contrary, a walled, unventilated well was scarcely ever seen in the rural section where he practised, but in lieu thereof a simple fosse, not very deep, was dug, and from time to time the contents covered with fresh earth and in the fall or winter removed to the fields. This then is just the condition that Dr. C. regards as involving only slight danger, while the walled-up, unventilated privy is a nuisance worthy of the severest denunciation. Where then do we find these dangerous wells in great number? As every one knows, in the cities, and in many cases, as in Philadelphia and New York, reaching to tens of thousands.

In my lecture it was stated that in "not more than one house out of five could any sign of sewer-gas be

detected. This, of course, had reference, to the city, not the country. While Dr. C. is quite excusable for this oversight, his thrust at the country physicians, in declaring that very few of them care to *learn how* to look for the causes of disease, may not be regarded in so favorable light, especially when we reflect that Trousseau designated the country physician as in the best position by far to discover the origin, development, and progress of typhoid fever; and truth compels me to assent to this declaration. In forty years of city practice no such opportunities for observing the origin and character of the disease were afforded the writer as during his ten years of country practice; and this may well appear from the fact that, in city practice, only one case in a family has occurred—three families alone excepted, in two of which two, and in the third family, four persons were affected. In this connection it may be stated that in the course of twelve months four cases of intestinal perforation occurred in my practice.

Dr. C. most truly informs us, "that facts are more forcible than words;" and what sane man can object to this forcible truism. Let us, however, put to the scrutiny a fact or two adduced: "Agricultural laborers," he tells us, "do not spend all their time in the fields," for they need sleep, and, thus far, very good. But when he asserts that "as a class they carefully exclude all ventilation from their rooms," we must dissent, *toto codo*. The most laborious and exhausting work of the laborer is during the hot weather of the harvest-time, and, as a rule he is apt to retire early in the evening. But, unfortunately, the room of the laborer is very often in the upper story or garret, and this very frequently is without ceiling, and the rays of the sun pouring down upon the roof during the long days of summer, renders the atmosphere of the room in a measure stifling; and, instead of excluding the air, he longs for the excessive heat of his room to pass away, as experience tells him it will, just as the night passes away, and the well-known refreshment of the morning hours draws near. In this connection it should be noted, that when epidemic dysentery prevails (in the country), many of the attacks are attributed to the excessive change of temperature from the early night to the morning hours, causing (during sleep) sudden and violent retrocession from the cutis to the abdominal organs. Healthy young males are said by Dr. C. to be especially prone to attacks of the fever, and here, we think, he is right, although in opposition to the view of Dr. F. H. Hamilton; but if, as he asserts, fragile women are better able to resist *infection* than strong women or men, it is contrary to general experience; for debility, no matter how produced, increases the liability to such infection or contagion; while it must be confessed that males or females of moderate physical conformation, if healthy, support acute diseases better, and are more likely to escape a fatal termination than the rugged and over-sanguine. Facts that have the appearance of causes are alluded to, but these, although constantly brought forward, can have, and should have but slight influence in determining questions of serious importance; for one proven, irrefutable fact, in contravention, outweighs a score of them.

About two columns of THE RECORD are taken up with a list of houses in which typhoid fever or diphtheria occurred. Every one of these houses, whether large, elegant, and furnished with conveniences, or small, and of an opposite character, had this in common, that in regard to filth, in one form or another they were simply abominations, and hence, were just the places (as many think) for an outbreak of these diseases, of which six were typhoid fever; and let it be borne in mind that Dr. C. has excluded cases where contaminated water might be thought to have had some influence in causing these outbreaks. But what of all this? If eleven cases of typhoid fever, as stated above, could occur in only two houses, having no such abominations of filth, nor of contaminated drinking-water, why may they not occur in houses such as Dr. C. describes? for, beyond all question, filth should confer no exemption from these attacks. Dr. C. intimates that persons who are habituated to the influence of agents productive of typhoid fever are seldom quite well, and, on the contrary, my experience is that young and healthy men are, especially in the country, attacked despite their actual good health.

In connection with, and conclusion of this subject, the writer must again put on record the testimony of Dr. John Syer Bristowe, President of the Society of Medical Officers of Health, confessedly one of the most sagacious observers and logical thinkers of the day, who writes as follows: "If we look to the remarkable influence which *simple variations of temperature and peculiarities of season* exert on the mortuary returns, in respect both of the number of deaths and the character of the fatal diseases, and compare therewith the comparatively small effect on the death-rate of even one of the most fatal of the zymotic diseases, or with the insignificant influence of deaths from enteric fever, diphtheria, and other affections, *over which sanitary science is supposed to exert a specially valuable influence*, we can scarcely avoid seeing that, on similar grounds, the deaths saved directly by the sanitary labors on which we are engaged must, under any circumstances, be so few annually as to produce *no distinct and unmistakable effect on the mortuary rate.*"

This sincere and ingenuous avowal of opinion by one, not only distinguished as an author and teacher, but who, in his exalted official position, had every opportunity to scrutinize all facts regarding outbreaks of typhoid fever, scarlet fever, and diphtheria, as bearing upon the question of their prevention, may well be commended to the serious consideration of those who, for years past, have positively promised the extinction of these diseases, under certain impossible conditions, yet with no other result than that just presented by the above-named conscientious and eminent authority in medical science.

THE TREATMENT OF ECZEMA IN PRAGUE.

By ROBERT B. MORISON, M.D.,
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SINCE the introduction by Professor Pick of medicated gelatines for the treatment of various skin diseases, there has been a most decided advance in the simplicity of such treatment and the results have been correspondingly good. Jarisch[1] said of chrysophanic acid gelatine, introduced a year ago: "The problem is solved of retaining the favorable action of chrysophanic acid upon psoriasis, and at the same time of eliminating any injurious secondary effect."

For more than a year eczema has been treated in the dermatological wards under Professor Pick in Prague, by the so-called medicated gelatine bandage, and an interesting article on this subject was read by Professor Pick[2] before the Verein deutscher Aertze, January 26, 1883. The difference in treatment of this disease between Vienna and Prague is striking in the extreme. In Vienna there has been no change made since the great Hebra gave the rules which are so universally followed. With the exception of the introduction of napthol by Kaposi, and which is used only in his wards, tar still holds the chief place in the Vienna treatment of eczema.

Though being far from criticising the excellent results obtained from this agent, I could not but be struck with its uncleanliness and disagreeable odor. As one passes through the wards in Vienna the patients are seen lying upon beds between two blankets, which, from the constant use of tar, have become so impregnated with it that the picture is anything but an agreeable one. Add to this the patient himself, covered often with a thin layer of this dirty-looking mass from head to foot, and

[1] Centralblatt für die gesammte Therapie, Heft I. 1883.
[2] Prager Medicinische Wochenschrift, No. 6, 1883.

one realizes that such treatment can only be used as a *dernier ressort.*

The importance of tar, however, being recognized by every dermatologist, it has been the desire of each one to obtain from it some essential ingredient which they hoped could be used as effectively and yet do away with its unpleasant application, but unfortunately neither the resinone, or resinin, or carbolic acid, or any of the other products of distillation contain all its virtues.

Even naphthol, so highly praised by Kaposi, and which certainly has some virtues, has not been able to take the place he first hoped it would.

This latter drug is now used almost exclusively in scabies alone, and even in this disease great care must be taken not to produce an inflammation leading to eczema from its universal application. The intensity of inflammation which it sometimes produces, and which far exceeds the application of tar itself, throws it entirely out of the field as a rival of the latter. This is the conclusion which all authors have arrived at after a somewhat prolonged trial since its introduction.

The general laws laid down by Hebra in the treatment of eczema were soothing applications in the acute stage, tar in the dry stage, and macerating applications in the chronic stage.

A patient was powdered with some inert powder until the acute inflammation and moist stage were passed, then tar applied and a cure accomplished.

The amount of labor and nursing required to treat the patient thoroughly according to these rules, to say nothing of the time lost by the patient when in the hospital, where it was necessary he should be, was very great. In chronic cases the time was lengthened so much the more because it was first necessary to render the disease acute by the various macerating applications before the regular treatment could be entered upon. That the results of this treatment, however, were most excellent could not be denied, but that it left nothing to be desired was far from the opinion of the author himself who was always trying to improve upon it.

The efficacious action of tar is generally conceded to be due to the mechanical protection which it affords to the skin and to its antiseptic qualities. There is so much chance for a mycotic appearance to be engrafted upon the moist stage of eczema (e. madidans), that it is one of the strongest arguments for the application of a drug if it has antiparasitic or antiseptic properties. Recognizing to the fullest extent this important property of tar, and being unable to find in any of its derivations a substitute for it, Professor Pick conceived the idea of supplying its place with some other medicine, which also possessed antiparasitic and antiseptic qualities.

For three months I have been studying closely and critically, through the kindness of Professor Pick, his gelatine treatment of this disease, and I have been greatly struck with the simplicity of its application, its cleanliness, and its most excellent results. Instead of the troublesome use of powders and salves, which in Vienna must be applied at least twice a day, the patient in Prague has immediately wrapped over his diseased parts linen bandages smeared with unguentum saponis containing five or ten per cent. salicylic acid. This is applied in any stage and left *in situ* for a week.

After the bandages are applied they are covered with what is known as tricot, and which is manufactured, in various sizes and at small expense, especially for Professor Pick in England. A patient thus dressed is able to go about his work with no inconvenience to himself, and no injury to his clothes. After a week's time he appears at the hospital, the bandage is removed, and the disease examined. If it is found necessary, from the still remaining inflammation and induration, a fresh bandage is applied and left on for another week. Then the gelatine is applied in the following manner: A portion of a mass made by dissolving fifty grammes of the purest gelatine in one hundred grammes of distilled water, and which has been allowed to cool previously, is melted by putting it in a cup and placing the cup in hot water. To this is added the required strength of salicylic acid, usually five per cent. When sufficiently cool this mixture is painted upon the diseased parts with a painter's brush made of bristles, such as is used in applying tar. The layer of gelatine is made about as thick as a sheet of writing-paper, and after it has dried is gently covered with a minimum quantity of glycerine spread on with the hand.

The use of glycerine is found to be necessary to render the gelatine layer pliable and to prevent its contracting, which it otherwise would do with considerable force; sufficient to irritate the skin. It is also worthy of note that it is not practicable to mix the glycerine with the gelatine before it is applied, as it prevents its hardening sufficiently and renders it sticky. It takes a very small quantity only of glycerine, after the gelatine has dried upon the skin, to render it soft and pliable. A few trials teach the nurse the amount required. This use of glycerine obviates the only bad effect which the gelatine can possibly have. With such a gelatine bandage a patient seldom feels the slightest itching, the diseased parts are seen through the transparent layer, thus rendering the progress of the disease visible without the removal of the application, and, what is much more agreeable to the patient, an ordinary bath removes all traces of it. So easy is this method of treatment that the patient can make his own applications in most cases, and there is no fear of a too strong action to be produced by the drug. In many cases of chronic eczema the application of this medicated gelatine is made immediately without the previous use of the above-mentioned linen bandages. Also in acute eczema, especially in crusta lactea, this rule may often be followed. There is no reason why the medicated gelatine should not be immediately applied in any cases of eczema at any stage; but experience has shown that salicylic acid first applied in the moist stage of acute eczema in the form of salicylicated soap ointment for a period long enough to reduce the inflammation, renders the use of medicated gelatine more prompt in its results.

Through the kindness of Professor Pick's assistant, Dr. Strach, I have been able to obtain the history of the following cases, which, among many others, I have personally watched:

Case I.—F. D——, a man, aged fifty-eight, book agent, entered the hospital May 23, 1883, suffering from chronic eczema. This had troubled him for ten years; it first began with intense itching, and the skin soon became chronically inflamed from scratching. Also suffered from constipation. The patient is a large, well-built man, but somewhat pale and thin. On both legs, extending from the toes to a little above the knee-joints, the skin is livid, somewhat tense, and here and there covered with easily removed crusts, leaving a moist surface exposed, the skin of the thighs on both sides thickened, and in some places covered with pustules and vesicles. The corresponding situations upon the arms show the same changes. On the day of entrance was ordered a ten per cent. salicylic acid soap plaster, made according to method above described. On the 28th salicylicated gelatine smeared upon all the diseased portions, except the knee-joints, which still retained the plasters. On the 30th all the plasters were removed and the patient sent out so far cured that he could himself apply further treatment at home.

Case II.—M. K——, aged fourteen, daughter of a shoemaker, entered the hospital March 6, 1883, suffering from eczema capillitii. A year ago the patient came to this hospital for the same trouble, and was sent home cured after ten weeks' treatment with white ointment and tar. This attack has existed fourteen days. The scalp, especially the posterior portion, is covered with a thick mass of crusts, piled upon each other so that the hair is closely matted together. The skin of the ears tense and

inflamed, moist and painful. On the 7th salicylicated soap plaster was ordered; internally, cod-liver oil. On the 15th tar was applied to the scalp, while the forehead and ears were treated with salicylicated plaster, and this was done in order to compare the two methods conjointly. This treatment was continued until the 18th of the following month. In the meanwhile the plasters on forehead and ears, having performed their required work, were removed, salicylicated gelatine applied in their place, and the disease cured. The scalp treated with tar was still quite inflamed, and though better, had not progressed as favorably as the other parts. At this time the tar was discontinued and salicylic acid used in its place. On April 30th the patient was so far cured as to be sent from the hospital.

CASE III.—J. L——, wife of a house-porter, entered the hospital April 4th, suffering from eczema universale. The patient has had the disease on both feet for two years, which began to spread to other parts four weeks ago. Home treatment was used, and also white ointment and tar, which was ordered by a physician, without any change for the better. She is a large, fat, well-nourished woman. On the forehead was a papular efflorescence, on the face a vesicular eruption, which in places was covered with crusts, exposing when removed a moist surface. The same appearances on the neck, legs, arms, and trunk. On the 10th was ordered a ten per cent. salicylicated soap plaster.

On the 18th, plasters taken off; skin found much less inflamed, and only in some places was the epithelial regeneration imperfect. To such places fresh plasters were again applied, while a five per cent. salicylicated gelatine was ordered for the rest of the body. On the 16th, the patient was so far cured as to be sent from the hospital with instructions how to apply the gelatine at home.

CASE IV.—A. F——, wife of a shoemaker, aged twenty-seven, entered the hospital March 20, 1883, suffering from eczema chronicum faciei. The patient had suffered for three years. It began during pregnancy, disappeared just before birth, and came on again while nursing. Was treated in this hospital a year ago with white ointment and tar. The eczema is situated upon the face and forehead, extending behind the ears and slightly into the hair, also upon elbow-joints and knees. Was ordered to be applied ten per cent. salicylicated soap ointment immediately to all the diseased parts. This was changed twice in two weeks, and the condition of the patient much improved. Gradually increasing doses of Fowler's solution of arsenic were ordered, but after two weeks was discontinued on account of the gastro-enteritis which it caused. The third week after entrance salicylicated gelatine was applied, and on May 1st the patient was dismissed cured.

CASE V.—W. K——, a girl, aged twenty-two, entered the hospital, suffering from eczema impetiginosum universale. Was immediately ordered ten per cent. salicylicated soap ointment, which was applied in the following manner: The toes and fingers were closely wrapped with short, narrow bandages, smeared with the ointment; legs, arms, and trunk with longer and wider bandages, while the head and face were completely covered in the same way. Over this was drawn the closely fitting tricot bandages, made to fit all the irregularities of the body by the skilful use of a few stitches. Thus covered completely, with only holes left for eyes, nose, mouth, etc., she could lie comfortably in a clean bed, or be dressed and wander around the wards. On the 23d, the soap plaster was removed and reapplied to all parts, except the face, which was painted with a five per cent. salicylicated gelatine. On May 14th, the infiltration had so far disappeared that the plaster was taken off and the gelatine applied everywhere. On June 9th, it was found advisable to reapply the plaster to the knees and elbow-joints, and these were easily kept in place by slightly overlapping them with the gelatine. On the 11th, all plasters were removed, and the treatment confined to the use of gelatine. On the 14th, the patient was dismissed cured.

The most satisfactory results, however, both to patient and physician are obtained in the chronic cases which appear so frequently at dispensaries. For instance, in cases due to varicose veins, I have seen the greatest benefit follow it. Instead of taking the patient into the hospital, he is simply bandaged and sent off, to return in a week's time. Nothing could be simpler, and it is satisfactory in the extreme.

In trying this treatment, there are a few points in the method of application which it is necessary to insist upon.

The salicylic acid must be thoroughly well mixed with the soap ointment whilst warm, and this must be spread, when at about the consistency of butter, evenly upon short linen bandages, which should not be more than one and a half inch in width, and even much narrower when applied to fingers or toes. The ointment should not be in a thicker layer than the back of an ordinary table-knife, and should be spread fresh every time it is used. It is well not to mix up too large a quantity of the ointment, as upon standing it hardens and is more difficult of application.

The gelatine should be prepared by dissolving in distilled water and heated in a porcelain crucible. After stirring thoroughly it is allowed to cool, and forms a cake, which takes the form of the crucible. This cake can be kept for any length of time in paper, and the necessary quantity broken off every time it is to be used.

The salicylic acid must be kept separate from it, and only added to the gelatine when it is melted. The mixture should not be painted upon the skin unevenly or in a thick layer. When properly applied it can be torn from the skin in quite large pieces, and it comes off without pain to the patient, or irritation to the disease. It sounds like the tearing of tissue-paper, and when thus torn off looks as if the patient was having his epidermis removed by force.

Any holes or rents in the gelatine covering may be repaired from time to time by a fresh application. The indications for the renewal of the whole covering are when it has worn off or after a bath.

After having seen as many as a hundred cases of eczema treated by this method, I consider it fully equals the old tar treatment in the results obtained, and that it far surpasses it in the simplicity of its application and in its cleanliness, a quality which recommends it immediately to the patient.

With its introduction, Professor Pick has made a great advance in the treatment of this most common of all skin diseases, and it is worthy of a most thorough trial in the hands of others.

THE MEDICAL VOYAGE OF LIFE.—First year: icterus neonatorum, hyperkinesis intestinalis, and vaccination. Second year: dentition, croup, cholera infantum, and fits. Third year: diphtheria, whooping-cough, and bronchitis. Fourth year: scarlet fever, worms, and meningitis. Fifth year: measles. Now half the children are dead. Seventh year: mumps. Tenth year: chorea and typhoid fever. Fifteenth year: hyperæsthesia sexualis. Sixteenth year: spermatorrhœa, chlorosis, and spinal irritation. Eighteenth year: blennorrhœa urethralis. Twentieth year: bubo, alcoholic cephalalgia, vertigo. Twenty-fifth year: matrimony. Twenty-sixth year: insomnia de infanto. Thirtieth year: dyspepsia, nervous asthenia. Thirty-fifth year: pneumonia. Forty-fifth year: lumbago, presbyopia. Fifty-fifth year: rheumatism, alopecia. Sixtieth year: amnesia, deciduousness of teeth, bony arteries. Sixty-fifth year: apoplexy. Seventieth year: amblyopia, deafness, anosmia, general dyskinesis, atonic digestive tract, rheumatismus deformans. Seventy-fifth year: finis.

AN EAR-RING.—A convention of Otologists.—*Puck.*

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE.[1]

By SAMUEL SEXTON, M.D.,

NEW YORK.

So long as the parts of the ear concerned in sound transmission remain in a normal state, sound may be said to almost exclusively reach the auditory nerve by means of their action, and since impulses of sound are thus practically excluded from all other channels (tissues) of transmission, the confusion which would otherwise arise is avoided.

Disease, however, may give rise to changes in the transmitting mechanism, owing to which vibratory impulses are but imperfectly conveyed in the natural way, *i.e.*, by aërial conduction, and then it is that the auditory nerve takes cognizance of sounds hitherto excluded from it by the peculiar arrangement of the transmitting apparatus; these unpleasant and strangely sounding undulatory vibrations are received through the osseous, muscular, and other tissues.

This altogether anomalous hearing, which may exist for a time continuously, or may be interrupted, as it were, by almost normal hearing, is dependent for the most part on the passage of sound to the ear through both aërial and tissue media at the same moment. Owing to the increased intensity of sound, thus partly heard coming through the better conducting medium of the tissues, an extremely confusing and disagreeable effect is produced, and the definition of an exclusively aërial transmission is wanting.

As is well known to otologists, hearing may thus become a very painful experience; if the patient then hears his own voice autophanously he feels that it has been much altered, or is not intelligible to others; indeed, it seems to be unrecognizable to himself even. The discomfort may be increased, if such a thing be possible where the physical and mental distress is almost unbearable, by the tinnitus aurium arising from the circulatory movements taking place near enough to the ear to be heard. Loud noises, such as the passage of railway trains, street trucks, the action of machinery and the like, owing to the better transmission of their more profound impulses through unaccustomed media of approach, fall upon the nervous centre of audition like a blow and thus give rise to dysacousma.

It being doubtful if the perceptive sense of hearing be increased by labyrinthine inflammation, we may suppose that so-called hyperæsthesia of the auditory nerve consists in the painfulness of the impression made by sound on the perceptive centre. If this be true, inflammation of the perceptive filaments of the auditory nerve in the labyrinth alone would scarcely be expected to increase the hearing power. On the other hand, it would be difficult to determine what degree of labyrinthine inflammation was necessary to impair the perceptive functions. Labyrinthine inflammation, viewed from a clinical point of view, is doubtlessly nearly always consecutive to middle-ear disease, but whether existing independently or in conjunction with middle-ear trouble, the transmission of sound would be more effectually performed by means of aërial conduction as regards intelligible perception. In middle-ear disease, however, the tuning-fork would be better heard through the tissues inversely to an increasing defect in aërial transmission, but not necessarily better heard, however, on account of labyrinthine defects.

Even if the perceptive apparatus were alone affected the tuning-fork would be best heard by aërial conduction, since the transmitting apparatus affords the better conduction and at the same time interferes with osseous conduction. But cases of labyrinthine disease alone are rare, and it is difficult to establish the fact that no middle-ear disease coexists in any given instance.

[1] Read before the American Otological Society, July 17, 1883.

CONCLUSIONS.

I. When the vibrating tuning-fork, placed on teeth or vertex is better heard through the tissues on one side, it simply indicates that the better ear excludes wholly or in part such (tissue) transmission, but it does not prove that the auditory nerve in either ear is affected.

(Of course, if the nerve of audition be gravely affected, sound will not be heard by any method of conduction.)

II. If the conductive mechanism is absent or greatly damaged in one ear, while the other remains more or less normal, aërial transmission will be found to be ineffectual in the diseased ear, while the tuning-fork allowed to vibrate as before will, therefore, be best heard in the diseased ear, and its vibrations will be almost entirely excluded from the healthy ear.

III. In deafness from labyrinthine disease, pure and simple, the middle ear being normal, the tuning-fork would be best heard, if heard in any degree, by aërial conduction, because bone conduction would be excluded.

(In those extreme cases where destructive disease of the nerve has taken place, impulses of sound may be appreciated irrespective of either the transmitting or labyrinthine structures; thus the deaf-mute is conscious of the sound of thunder, artillery, drums, stamping with the foot upon a floor, and the like.)

IV. If the above deductions be true, we may conclude that the tuning-fork is of less value than has been supposed in the differentiation of aural disease.

A CASE OF HODGKIN'S DISEASE.

By W. U. TAYLOR, M.D.,

MOORES, N. Y.

In September, 1882, a child was brought to my office by its father, who gave the following history: L. M——, nine years of age; French; scholar; was in usual health ("never very strong") until June, 1882, when she was poisoned by some vine while picking strawberries. Her face and hands were badly swollen, and before the swelling went down erysipelas set in, lasting about two weeks. Soon after this some enlarged glands were noticed just back of each ear. These grew rapidly and others appeared below on each side of the neck and in each axilla and groin. They grew rapidly in spite of treatment until I saw the case, and, in fact, to its termination.

On examination the cervical, axillary, and inguinal glands were found enlarged, a dozen or more in each region, varying in size from that of a pea to a hen's egg, the largest being in the right axilla. In her left groin there was an enlarged duct the size of a lead-pencil and about three inches long. All the glands except the parotids were freely movable; were firm, elastic, and without fluctuation. The parotids were enlarged, so that at the first glance I thought the child had mumps. On opening the mouth the tonsils were found greatly enlarged so as to fill the isthmus of the fauces and prevent the use of the smallest laryngoscope I had. The bronchial glands were apparently enlarged, respiration being stridulous. The liver and spleen were enlarged, there being flatness on percussion from the fourth rib to the umbilicus and the lower border could be plainly felt and its position seen. The only resonance was in the left inguinal region. The pulse was rapid and feeble, respiration shallow and frequent; skin dry and hot. Pulse, respiration, or temperature not noted at this time; appetite variable; bowels regular at present, but is subject to attacks of diarrhœa; urine scanty and high-colored. Measurements at this date were: around the head at the upper lip and angle of jaw, 17 inches; around chest, at lower border of sternum, 24 inches.

The child living at a distance, it was not seen as often as I wished. It was ordered iod. potass. with syr. iod.

iron and citrate of iron and quinine, and an ointment of iod. ammonium, to be rubbed upon enlarged glands and over the abdomen.

October 3d and 7th.—There was apparent improvement in its general condition. Able to go up and down stairs; plays about the house; appetite good; slight diarrhœa, checked by chalk mixture.

October 12th.—Has spasmodic cough, at times attacks of "croup;" pulse, 110; temperature, 100°; had high fever the day before; said to have "taken cold." Examination of the chest gave negative results, the tracheal râles obscuring any others. Measures: around head, 17½ inches; chest, 24½ inches; at ninth rib, 25 inches; at navel, 24½ inches.

October 17th.—Very weak; confined to bed; pulse, 130; respiration, 24; temperature, 99½°.

October 21st.—Weaker; extreme dyspnœa; unable to lie down; complains of pain about the heart; urine very scanty; on standing it seems composed of urates alone; no albumen found by either heat or nitric acid; specific gravity not taken. Given infusion digitalis, ℥ ss., to be repeated in six hours. Measures: Face, 18 inches; chest, 26 inches; navel, 26½ inches. Cough paroxysmal; very severe.

October 24th.—Increased dyspnœa; has "*boring*" pains in throat, dorsal region, and colic pains in abdomen; œdema of right arm and leg.

Died of exhaustion, October 27th, at 2 A.M. The pain and dyspnœa continued until death. Patient was conscious until a moment before she died, though drowsy from effects of anodynes. The treatment consisted of use of iod. potass., syr. iod. iron, citrate iron and quinine throughout the case. Cod-liver oil was given a short time, but causing nausea, was stopped. Concentrated diet ordered, but not carried out, the child having about what it wished. The inunction of iod. ammonium ointment was continued until it caused so much irritation as to prevent sleep. It was not used after October 17th.

During the first two weeks there was marked improvement in the general condition, but none in the glands, the enlargement progressing steadily until death occurred.

The child was about the house and ate at the table until October 17th. After that there were several days when she was apparently better.

Authorities seem agreed as to the unfavorable termination of these cases, and it may be said of them as Dr. C. was wont to say, in lecturing upon "croup": "Gentle-MEN! If you have a case of *true* mem-BRAN-ous croup—and it gets *well—it's* NOT CROUP!"

SYPHILITIC MAMMARY DISEASE.

REPORT OF A CASE OF INHERITED SYPHILIS—REMOVAL OF MAMMARY TUMORS BY THOMAS' METHOD—AFTER TREATMENT BY THE IODIDES.

BY CHARLES C. F. GAY, M.D.,

SURGEON TO THE BUFFALO (N. Y.) GENERAL HOSPITAL.

I HAVE recently had under observation a case of so much interest to myself that I have thought report of it would be of interest also to the profession. Miss C. M——, aged nineteen years, came under my charge on March 7, 1883. She is an only child; her health had been good until four years ago, when she began to have pain in both mammary glands; more especially the left one. The glands were well developed.

During these four years she had been a great sufferer. The left breast became so sensitive that the weight of the bedclothes upon it could not be borne. Her menstruation was regular and in no way influenced the pain of the mammary gland, either to lessen or increase it. A day or two before the patient came to me, she was examined by the gynecologist of the hospital, who reported the hymen unruptured. There was no question raised whatever against the virtue and morals of the patient. She was well educated, cultivated, and refined. Her left breast was hard, nodular; felt like scirrhus and would have been so pronounced, I am quite sure, had her age been forty-five instead of nineteen years. The breast was so excessively tender to the touch, that it could not well be examined without ether; the nipples were retracted. At a consultation, the tumors were pronounced non-malignant, but removal was advised. The young woman stated that eighteen years ago her father had a cancer cut out from his throat; but as the father was still living, this statement of the nature of his ailment was regarded as apocryphal, and did not contribute toward a diagnosis of cancer in the case of the daughter. There appeared to be three or four tumors of the size of a hickory nut in the left, and one of smaller size in the right breast. The patient was extremely anxious to have these tumors removed as soon as possible, and had travelled a considerable distance in order to have an operation performed, and as removal was decided upon at the consultation, the patient was, on March 14th, etherized, and Thomas'[1] method for removal of benign tumors employed. This method consists in making a semicircular incision around the lower half of the circumference of the breast, in the crease formed by the junction of the gland with the chest, dissecting up the gland and turning it inside out. This being done, examination showed that the tumors so much involved the gland itself, as to necessitate removal of the greater portion of it. The integument was replaced, secured by sutures, and the wound treated antiseptically with the boro-glyceride.

In three weeks there was no union, nor signs of union, in any part of the wound; it looked and smelled like a syphilitic ulcer, and the tendency to disintegration preponderated over the process of repair. Diagnosis of syphilis was made, and the iodides of mercury and potash employed at once. In four days the whitish stroma was removed, and in its place red and healthy granulations appeared; the offensive odor was dispelled, and in three weeks more the wound was closed. After our patient left for home, search of the hospital records was made for the father's case and his record found, from which I learned that he entered the hospital with syphilis when our patient was a child just four months of age. He remained only a few days, but returned again four times during a period of two years. He entered the hospital twice for syphilis, once for secondary, and once for tertiary syphilis. It is fair to conclude, that this man had the primary lesion months before his first entrance to the hospital, and long before the birth of the child. His disease was recognized as syphilis at that time by the attending surgeon, and the record accordingly made. There is no record of cancer nor of removal of a cancerous tumor. The immediate effect of the anti-syphilitic treatment employed, in case of the young woman, proved the correctness of the diagnosis, and it was confirmed and corroborated by the hospital records. The records furnished sufficient evidence to establish the fact that the disease was inherited; that the poor child was conceived in sin and endured suffering in consequence thereof. The mother was pregnant but once, and her health had been impaired for a long time.

The conclusion is, that the husband communicated the disease to the wife, and she in turn gave it to the child in embryo; that the taint remained latent for a period of years, and at length manifested itself in the mammary glands. If one could have diagnosed the disease and have treated the patient for specific disease, the mammary tumors might have been dispersed and an operation forestalled. This, however, is conjectural only. The operation resulted in substantial benefit. The right recovered soon after the performance of the operation upon

[1] New York Medical Journal, vol. xxxv., p. 337, 1882.

the left breast. Whether it were neuralgic induration or an affection arising from sympathy with disease of the left breast, I have no means of judging. I am led, however, to suspect that in an occasional instance the so-called "neuralgic indurated breast," and the "painful breast" of authors, might be classed under the head of syphilitic mammary disease.

Progress of Medical Science.

ACUTE ANASARCA WITHOUT ALBUMINURIA IN PREGNANCY.—The following case is related by Dr. M. H. Rendu in *La France Médicale* of April 19, 1883. A woman, twenty-two years of age, pregnant for the second time, suffered greatly from fatigue and anxiety while nursing her first child, who was sick with meningitis. She took cold, as she supposed, one night toward the end of the child's sickness, and had repeated chills with lumbar pains and general weakness. Soon a persistent headache supervened, accompanied by nausea and anorexia, but without vomiting. About five days later the patient noticed that her legs were swollen, and the anasarca in a short time became general, but was especially marked in the eyelids and breasts. The pulse was 110; temperature, 103.5°. The urine was scanty, less than thirty ounces being passed in twenty-four hours, was red in color and deposited urates in abundance. It contained, however, no trace of albumen, although daily examinations were made for a month. The other organs seemed healthy, the heart was normal, and there was no history of recent scarlatina. The patient was placed on milk diet and diuretic remedies, but continued to grow worse until it was feared that œdema of the brain would ensue and give rise to eclampsia, or that the patient would die from pulmonary œdema. It was then decided to bleed the woman, and accordingly between nine and ten ounces of blood were taken. At the same time numerous punctures with a fine needle were made in the swollen vulva and legs, giving exit to an abundant flow of serum. Improvement at once set in, and every trace of œdema had disappeared in two weeks.

DIAGNOSIS OF THE DIFFERENT FORMS OF URETHRAL DISCHARGE.—Dr. Fürbinger thus distinguishes the different discharges taking place from the male urethra (*Centralb. für klin. Medicin*, April 21, 1883). Spermatorrhœa is a loss of seminal fluid which occurs during defecation or at the completion of micturition. The condition, which is much more common than is ordinarily supposed, is not a final stage of pollutions, but is caused most frequently by gonorrhœa and sexual abuses. Spermatorrhœa becomes azoöspermatorrhœa when for any cause (usually from epididymitis) the testicles cease to produce spermatozoa. Prostatorrhœa is the discharge, sometimes continuous, sometimes only during defecation and urination, of the prostatic secretion. It is a rare condition, and is a symptom of chronic prostatitis, usually of gonorrhœal origin. Urethrorrhœa ex libidine is a phenomenon occurring usually in anæmic and nervous individuals. It consists of a scanty discharge, without orgasm or ejaculation, accompanied by intense sexual excitement and strong erection. The last discharge to be considered is gleet.

Of these five processes two are easily recognized. Spermatorrhœa is evidenced by the presence in large numbers of spermatozoa (a few here and there signify nothing), and urethrorrhœa is readily recognized by its characteristic mode of onset. The secretion of the latter is the product of the urethral glands and Cowper's glands. It is clear, stringy, and contains but few epithelial and round cells. A very abundant discharge points to azoöspermatorrhœa. The absence of pus-corpuscles also points to the same condition, though their presence has no weight on the other side, as urethritis may exist at the same time. In such cases the presence of the specific secretion of the seminal vesicles must be determined. If one finds a jelly-like substance resembling in shape grains of sago, that is conclusive; but if this is not found, it may be that it is in solution, and may then be precipitated by a strong alkali. The secretion is allowed to stand for a time, and then a clear drop is placed in a watch-glass, and a drop of caustic potash added. If now the drop shows a thick white cloud, or streaks, it is evidence that the secretion contains seminal fluid. If this process shows that we have not to do with azoöspermatorrhœa, there still remains the differential diagnosis between prostatorrhœa and gleet to be determined. In the latter the discharge is very scanty; in the former, digital examination reveals great tenderness on pressure of the prostate gland. Indications of prostatorrhœa are: 1, the presence, unfortunately not constant, of numerous amyloid bodies; 2, numerous typical cylinder cells, especially when in the double layer arrangement of glandular epithelium; 3, the large Böttcher's crystals. The presence of the latter is ascertained by mixing a drop of the secretion with a drop of a 1 per cent. solution of phosphorated ammonia upon an object glass. In about an hour numerous large, exceedingly beautiful crystals are formed. The secretion of the prostate, the author insists, is not clear, odorless and thick, as usually stated, but is thin, of a milky cloudiness, and possesses the characteristic odor of spermatic fluid.

An aid to diagnosis is also found in the time of the appearance of the secretion in the urine. The first and last portions are to be separated from the principal flow of the urine. The presence of the secretion in the first portion points to gleet; in the first and second portions to prostatorrhœa; in the third portion to azoöspermatorrhœa. The latter appears in the form of nearly transparent, thick, stringy masses, and sometimes also in the shape of sago grains.

A RARE FORM OF IMPERFORATE ANUS.—Dr. Ramonet relates the case of a child, three days old, who was brought to him on account of imperforate anus. There were up to that time no symptoms of strangulation of the bowels. The perineum presented a perfectly plane surface without elevation or depression to indicate the point at which the rectum terminated. But at the upper and posterior part of the scrotum, at the median raphé, there was a small orifice through which a little meconium escaped. A sound introduced into this orifice could be passed backward just beneath the integument to the point at which the anus ought to be. The operation showed that there was no deviation of the rectum; it was well formed and ended in the normal situation. The anus, instead of opening directly, formed an elbow beneath the skin and terminated with a fistulous opening at the root of the scrotum.—*Revue Médicale*, May 12, 1883.

RESECTION OF THE WRIST.—From a careful study of upward of sixty cases of resection of the wrist, Dr. G. Nepveu is not led to think very highly of the operation as regards either the cure of the disease or the restoration of function of the joint (*Revue de Chirurgie*, May, 1883). The following conclusions are formulated by him: 1. Resection of the wrist is not usually dangerous to life, especially when performed under antiseptic precautions. 2. A good result is sometimes obtained in the cure of the local disease and restoration of function. 3. This is, however, rare, occurring in not more than one-fourth of the cases. More frequently the cure of the disease is incomplete and the restoration of function but partial. 4. A more grave termination is not uncommon; sometimes death ensues, and sometimes, owing to non-arrest of the disease, amputation is required. 5. One cause of this want of success in resections of the wrist is that the operation is often undertaken in unfavorable cases. The operation is contra-indicated in osteitis and

in synovitis with tubercular deposits. 6. To obtain the best results as regards the usefulness of the joint, as little as possible of the bone should be removed and the periosteum should be preserved as far as the conditions of the case will permit. 7. An operation should never be had recourse to until all conservative therapeutical measures have proved unavailing. Such measures are immobilization, compression, counter-irritation, prolonged antiseptic lotions, etc.

Immunity of Copper Workers from Contagious Diseases.—At a recent meeting of the *Société de Biologie* of Paris, Dr. Burq presented an interesting communication upon the immunity enjoyed by workers in copper during epidemics of cholera and typhoid fever (*La Tribune Médicale*, April 29, 1883). He stated that of forty thousand such workmen, two only died during each of the epidemics of typhoid fever in 1876 and 1883. Furthermore, the statistics of a society of three hundred members, all copper workers, showed that during the entire period of the existence of the organization (sixty-four years) there had been but three deaths from epidemic diseases among its members.

Syphilitic Liver in a Boy.—Dr. Teissier relates the case of a boy, fifteen years of age, who came under his care suffering from ascites; there was also diarrhœa and a slight cough. The diagnosis was made of tuberculosis of the peritoneum, intestines, and lungs. Paracentesis was performed several times and the child was put upon a tonic and diuretic treatment, but he sank rapidly and died. At the autopsy there were no tubercles discoverable in any of the organs or serous membranes. Of all the viscera, the liver alone showed any changes. It was rather small and presented upon its surface yellow nodules, hard as a stone and covered with a fibrous envelope. This latter sent out white fibrous prolongations, following the course of Glisson's capsule, and giving to the liver a lobulated appearance. Examination, both macroscopical and microscopical, showed the case to be syphilis of the liver, and this was further confirmed by the statement of the parents that the child had acquired "a disease" from his nurse.—*Lyon Médical*, May 13, 1883.

Chronic Myocarditis and Diseases of the Coronary Arteries.—Cases frequently occur—more particularly among well-to-do people, more rarely in the poorer class of persons over middle age—in which death occurs suddenly, without previous symptoms, excepting, perhaps, a feeling of constriction or pain at the chest. Dr. Carl Huber (*Virchow's Archiv*) gives a number of such cases in which the cause of death appeared to be sclerosis of the coronary arteries, and subsequent chronic myocarditis. The consequences of this myocarditis are aneurism of the heart, thrombosis, dilatation, and hypertrophy. The clinical symptoms are angina pectoris, stenocardia, and asthma. These symptoms generally occurred in paroxysms some months before death, generally after excitement, either bodily or mental, several times after dinners. In some there was irregularity or intermittence of the pulse, occasionally cardiac bruits; sometimes there was a sudden giddiness with temporary loss of consciousness on stooping, walking quickly, or going up stairs. The attacks were sometimes also accompanied by symptoms of collapse. Death sometimes occurred almost at once, but at other times several minutes, hours, or even days elapsed, during which time there were the symptoms of cerebral apoplexy, paralytic conditions, and alterations in the cardiac rhythm. The peculiarity of this cardiac affection is that it has nothing whatever to do with endocardial or pericardial disease, but depends on arterial sclerosis. Cardiac apoplexy, the author considers, is a condition to be reinstated in its old place as a well-marked disease, like cerebral apoplexy. It sometimes occurs in young individuals, the general cause of such occurrence being alcoholism or syphilis.

The Effects of Disease on the Size of the Heart.—This subject has been investigated by Dr. Spetz (*Deutsches Archiv für klin. Medizin.*). He finds that in typhus there is no characteristic change in the dimensions of the heart and the large vessels; the same is the case in puerperal pyæmia. In phthisis the heart is diminished, and especially the left ventricle. The right ventricle is often somewhat diminished, but not in proportion to the diminution in the weight of the body. It is sometimes even hypertrophied, but not as a rule. The ratio between the depth of the left ventricle and the circumference of the aorta is diminished, and as this is not compensated for by hypertrophy of the muscular walls of the ventricle, there is a diminution in the arterial tension. Consequently the pulse in phthisis is soft and small. In cancer the depth of the left ventricle is still more diminished than in phthisis, and the right ventricle is affected almost as much as the left. In granular kidney, both ventricles increase very much, but especially the left. The aorta is not correspondingly dilated. In consequence of this the tension in the arteries is very greatly increased. In myocarditis, also, the heart is dilated and hypertrophied, but the left and right ventricle are almost equally affected. In chronic emphysema both ventricles are much dilated, with very little thickening of the muscular walls. Both ventricles are nearly equally affected. The pulse is full, but small and languid

Mode of Reproduction of the Liver.—While conducting some experiments upon the spleen of a dog, Dr. Tizzoni accidentally wounded the liver at the edge of one of its lobes. Six months later he discovered a tumor at the exact point where the wound of the liver had been made. It had all the gross appearances of the liver-substance. A portion was treated with bichromate of potassium and alcohol, and then numerous transverse and longitudinal sections were made. From a study of these the author arrived at the following conclusions: 1. Under certain circumstances the liver may be reproduced at the point where it has been wounded; there is a new formation of hepatic cells and biliary ducts. 2. Unlike what occurs in the spleen, the great omentum adherent to the wound in the liver does not take part in the reproduction of the substance of the organ, but serves merely as the stroma in which the newly formed tissue arises and is developed. 3. The new tissue arises from the pre-existing hepatic cells, which, by cellular multiplication, send out offshoots which penetrate into the epiploön like the prolongations of an epithelial tumor in the connective tissue of the skin; the hepatic cells present numerous nuclei, sometimes as many as twelve, which are deeply stained by carmine. 4. Some of these cellular prolongations have a light centre and assume the appearance of bile-ducts, while others are filled with protoplasm and nuclei, and resemble then the hepatic cellules. 5. The newly formed hepatic cells, which resemble histologically the old ones, have that in common with the hepatic cells of the embryo that they remain for a long time separated by true lacunæ filled with blood. 6. The acinous disposition is wanting, but large blood-vessels, especially veins, and biliary ducts can be seen. The author concludes from this that the regeneration of the liver is in all points identical with the embryonic development as described by Remak and Kölliker.—*Journal de Médecine de Paris*, April 28, 1883.

Naphthaline in Frost-Bites.—Dr. Lindenbaum has employed this remedy with success in a number of cases of frost-bite. The dressing is usually changed every seven to ten days. In some instances the patients complained for two or three hours after the application of severe sticking pains, caused probably by small crystals of naphthaline. As far as the author's experience will permit him to judge, the same remedy is equally beneficial in burns.—*St. Petersburger Med. Wochenschrift*, June 2, 1883.

contains blood-disks, with parallel surfaces, one-half or one-third smaller than the red blood-corpuscle. Hayem describes them as small biconcave disks, of a slightly yellowish color. Laker recently confirms Hayem's view as to their shape, but thinks the yellow color artificial. Norris, like Hayem, considers them biconcave, but doubt has been thrown over the accuracy of his observations because he describes them as of nearly the same shape and size as the red blood-corpuscle.

The actual number of these bodies, as well as their physiological importance, must be very much greater than has been hitherto supposed, if we may believe the more recent investigations. Norris estimates that his colorless corpuscles rank in number between the white and red. Bizzozero does not venture any estimate. Laker, who has devised some special methods of coloring and studying them, counted in one field 180 blood-disks or hæmatoblasts, 44 red, and 9 white corpuscles; in another field the ratio was 830, 270, 0. This estimate, however, cannot give a true idea of their actual proportions in the blood.

It is as yet impossible to say whether these corpuscles precede the red or follow them in their development.

Their function has of late been studied with special reference to their relation to the process of coagulation. The prevailing view regarding the origin of the fibrin-factors has been heretofore that of A. Schmidt's, viz.: that while fibrinogen exists in the plasma, the fibrinoplastin and ferment are contained chiefly in the white blood-corpuscles; these latter dying, give up their factors, and fibrin is formed. Hoffman has claimed that in coagulation 71 per cent. of the white corpuscles are used up and destroyed.

Landois and others had, however, shown that the red corpuscles are also apparently concerned in fibrin-building, and Hayem has recently been arguing that the hæmatoblasts, not the white cells, are the chief contributors to the process. Three investigators, Laker, Bizzozero, and Rauschenbach, now come to his support, and cite evidence to show that the hæmatoblasts do play this important part. It is found, for example, that proplastic fluids like that of hydrocele, which contain fibrinogen but not the other factors of coagulation, do not coagulate when the fluid from the spleen or lymphatic glands, so rich in leucocytes, is added, but do so on the addition of the little blood-disks.

The evidence so far shows that the blood contains a third corpuscle, which plays a part in the process of coagulation; also that the factors in coagulation are derived not from any of the different blood-elements alone.

The extremely important part which fibrin and its factors play in septic fevers, when it is often rapidly developed with great rapidity and in extraordinary amounts, makes the study of its origin an interesting one. Recent experimental studies of Maissurians ("Inaug. Diss.," Dorpat) upon the changes of the coagulability of blood in fever have shown this very strikingly. The importance of the coagulation process in its relation to operative surgery lends a further interest to the investigations into its ultimate nature.

THE HONOR OF KNIGHTHOOD has been offered to Dr. Pitman, Registrar of the Royal College of Physicians.

News of the Week.

THE INFLUENCE OF THE DOCTOR IN HEALTH RESORTS.—"Each winter resort," says John Richard Green in "Stray Studies," "brings home to us the power of the British doctor. It is he who rears pleasant towns at the foot of the Pyrenees, and lines the sunny coasts of the Riviera with villas that gleam white among the olive groves. It is his finger that stirs the camels of Algeria, the donkeys of Palestine, the Nile boats of Egypt. At the first frosts of November the doctor marshals his wild geese for their winter flitting, and the long train streams off, grumbling, but obedient, to the little Britains of the south."

BROMIDE OF SODIUM IN SEA-SICKNESS.—Mr. T. M. Kendall reports (*British Medical Journal*) the results of his treatment of two hundred cases of sea-sickness. He confirms the views of the late Dr. Beard. that bromide of sodium is the most efficient of all remedies. He found that in doses of ten grains, three times a day, it was effectual. Mr. Kendall condemns the too indiscriminate use of oranges, lemons, champagne, and brandy.

A POST-GRADUATE SCHOOL in Philadelphia has been organized in connection with Jefferson Medical College.

THE NEW MICHIGAN MEDICAL REGISTRATION LAW, which was approved June 6th, will go into effect on September 6, 1883. It allows all persons who have been in practice for five years, or who are regular graduates from legally incorporated medical colleges to register at the county clerk's office. It is made a misdemeanor for any person to practise without registering. The supervisor is required to make annually a statement of the number of physicians in his district. There appears to be lacking any machinery for carrying out the law efficiently. The *Medical Age* says: "The profession were given no opportunity to be heard on it during its passage, and although it was introduced by a physician it is eminently laymanlike in its construction. The hand of the lawyer is, moreover, very conspicuous in the absence of the faintest shadow of it. It is clear, from the careful perusal we have given it, that the number of doctors in Michigan cannot be increased after December 6th next, and until the act has been amended so as to permit of such increase. It is expressly provided that all registrations shall be made during the three months following the date on which the act takes effect (September 6th to December 6th), and no provision is made for those who may wish to commence practice in the State subsequently to December 6, 1883. This may have been designed by the framer of the bill. But whether a design or a blunder, all future graduates and students of our Michigan medical colleges, as well as all graduates and students from the colleges of other States and countries, will, it appears, be obliged to settle elsewhere than in this State while the provisions of our new medical act remain operative.

TELEPHONIC CONNECTION BETWEEN HOSPITALS AND THE ATTENDING STAFF.—The treasurer of St. Bartholomew's Hospital, London, has completed arrangements with a telephone company with a view of placing the principal hospitals in London in direct telephonic com-

munication with the surgeons and physicians belonging to those institutions. The scheme proposed is that the various hospitals should be made the centre of communication, that the telephone company should connect the large hospitals with the nearest telephonic exchange, free of any charge, the company being remunerated by the payments to be made by the surgeons and physicians for connecting their private residences with the exchange.

EXAMINATIONS IN STATE MEDICINE.—The Royal College of Physicians intends to institute an examination in State Medicine.

DR. JOHN A. OCTERLONY has been appointed Professor of Obstetrics and Diseases of Women and Children in the University of Louisville. The university is to be congratulated.

THE DRAKE MEDICAL SOCIETY is the title of a new and enterprising organization recently established in Cincinnati, O.

HOW TO DEAL WITH CHOLERA.—The *Lancet* takes a very positive and hopeful view of our ability to cope with cholera. It seems strange that the disease should so persistently spread when disinfection will so promptly stop it. The fact is, the *Lancet* is too sure of its statements. Cholera can be checked, but it cannot always be at once stopped by any method if it once gets a strong foothold. Our contemporary says: "What, however, we do assert, is that medicine, as a preventive art, in its dealings with the germs of disease, ought to be able to grapple instantly and successfully with cholera. We know that it is propagated solely through excreta, and that water is the great carrier of the infective germs. Obviously, if the excreta of a cholera patient are allowed to dry in contact with the air, they may float away in the atmosphere, and the air will then become infected; but in a primary sense it is the water to which we must look. In any case, it has been demonstrated that, provided all the excreta from a cholera patient are instantly destroyed—not merely disinfected—the disease will not spread. The malady can no more develop *de novo* than a plant can grow without seed. It is no use waiting until the disease has effected a lodgment in our midst. If choleraic dejecta have passed into the sewers before the nature of the disease has been recognized, as is most likely to happen, the seed has been already sown broadcast, and the production of a crop of cases in some locality—it may be seemingly far from the first case, but in connection with it—will be inevitable. The only effectual safeguard against the epidemic we desire to avoid is to begin at once to destroy *all* diarrhœa stools, lest too late they may be found to have been choleraic! As a matter of precaution we ought always to destroy the stools of fever and diarrhœa. It is wanton recklessness to allow them to pass into the sewers. This is how disease is spread and perpetuated, when it should be stamped out. Whatever disinfectant we employ should be used *at once*, and of strength sufficient to accomplish the object in view. These are hints which should be reduced to practice without delay."

THE SANITARY INSTITUTE of Great Britain will meet at Glasgow, September 25th to 29th.

GOLD MEDAL TO DR. BROWN-SÉQUARD.—The Royal College of Physicians has awarded the gold medal, founded in memory of the late Dr. Baly, as a mark of distinction in physiology, to Dr. Brown-Séquard.

DR. BENJAMIN BALL has been elected a member of the Académie de Médecine.

AMBULANCE SERVICE IN PHILADELPHIA.—The committee on Medical Charities of the Philadelphia Society for organizing charity, says the Philadelphia *Medical Times*, announced at a recent meeting that steps had been taken to supply all the police-stations with hand-ambulance wagons, and before very long every station-house will be supplied. In some of the stations they have been already in active use for nearly two years.

THE NEW JERSEY STATE DENTAL ASSOCIATION held its annual meeting at Asbury Park, July 18th and 19th.

IOWA VITAL STATISTICS.—The Secretary of the State Board of Health has just tabulated his returns for 1882. The number of births reported for the year was 7,753; marriages, 5,282; deaths, 10,059; still-births, 225. Scott County reports the birth of 22 pairs of twins, leading the State, but Marion and Warren Counties, lying side by side, return 20 each. Clark is the only county reporting triplets. Despite twins and triplets the death-rate is unusually larger than the birth-rate, an ominous condition of affairs.

THE BRISTOL MEDICO-CHIRURGICAL JOURNAL is the title of a new provincial journal, published under the auspices of the Bristol Medico-Chirurgical Society, and edited by J. Greig Smith. It contains a large amount of original matter, is well illustrated, but printing and paper are not quite up to British standards.

PROSECUTING IRREGULAR PRACTITIONERS IN CANADA.—At the triennial meeting of the College of Physicians and Surgeons, Province of Quebec, held at Quebec, July 11th, the president reported that systematic proceedings had been undertaken to prosecute violations of the medical act. Forty-nine suits were instituted, of which thirty-five were successful.

THE COLLEGE OF PHYSICIANS AND SURGEONS of this city has sustained a loss in the resignation of Professor Dalton from the Chair of Physiology. It is understood that the resignation is due to Professor Dalton's ill health. He is succeeded by Dr. John G. Curtis.

THE CENTRAL ASSOCIATION OF BOHEMIAN PHYSICIANS held its annual meeting at Kommotau on July 14th. Papers were read by Professors Chiari and Breiskey, and others.

THE ANATOMICAL BILL, legalizing the use for scientific purposes of dead bodies, has failed in the Georgia Legislature. The *Register* says that bodies will now be scientifically snatched.

CORONERS IN CONNECTICUT.—The Legislature of Connecticut has passed a law requiring that coroners in that State shall hereafter be attorneys-at-law, familiar with criminal practice and medical jurisprudence, and that one such person for each county shall be recommended by the State's attorney for such county to, and be appointed by, the judges of the superior court to

hold his office for the term of three years, and until another shall be duly appointed in his stead, unless sooner removed from office for cause. And the said coroner is required to appoint for each town of the county "an able and discreet person, learned in medical science, to be medical examiner." Upon these officers is devolved all the duties in detail which have hitherto *not* been exercised by coroners under the old régime, and such as are common throughout the United States outside of this commonwealth.

THE HOSPITAL CHAPLAINS have been withdrawn from the Paris hospitals despite some very earnest protests.

THE COUNT DE CHAMBORD.—Germany and France have united over the body of the sick king, but have not agreed as to his condition. Professors Billroth, Dratsche, Wiener, and Bamberger came all the way from Germany to view him, and Vulpian, with other eminent Parisians, have been in consultation. It is agreed that he is obese, has a fatty heart, and gastric derangement. Some have said that he was suffering from phlebitis.

DR. W. B. RIZNER, a prominent physician of Cleveland, O., dropped dead in his residence in that city on July 21st. He was fifty-nine years of age. He was the inventor of a mechanical finger used in microscopy, and President of the Cleveland Microscopical Society.

THE HUNTER'S POINT NUISANCES.—The Governor and the State Board of Health have for some time been quietly collecting evidence against the various Hunter's Point factories, and on the 24th thirty-two of them were surprised with an order forbidding any further stench-making manufactures. The penalty for disobedience is $1,000, and two years' imprisonment.

Correspondence.

OUR PARIS LETTER.

CONTAGIOUSNESS OF PHTHISIS—THE LEAGUE AGAINST VIVISECTION—ASYLUMS FOR CHILDREN—NACHTEL'S AMBULANCE SYSTEM—COUNT DE CHAMBORD.

PARIS, July 16, 1883.

DR. DEBOVE, who was appointed temporarily to take charge of the late Professor Lasègue's wards at "La Pitié" Hospital, lately delivered a most interesting clinical lecture, in which he endeavored to demonstrate, by cases under his immediate care, as well as by other examples, the correctness of the view so steadily gaining ground that pulmonary phthisis is contagious. According to him "tuberculosis is *always* due to contagion, and that no one becomes tuberculous unless he receives from the exterior the germ of the malady, the bacillus of tuberculosis." The lecture was published in the *Semaine Medicale*, whereupon Dr. Henry Bennet, whose name is so intimately connected with the subject of phthisis, endeavored to refute the conclusions of Dr. Debove as being too positive, and pointed out the dangerous consequences of such a theory, which, if true, the disease would be worse than the plague, and each tuberculous patient would have to be treated like the lepers of old, that is, he would have to be completely isolated from the rest of the world to prevent contagion. Social intercourse would be simply impossible and the inconveniences to the individual himself and the risks of his presence anywhere would be so great that it would be as logically a charity, almost a duty to kill him as would be done with animals affected with rinderpest. Fortunately, however, adds Dr. Bennet, clinical experience proves that such a doctrine is absolutely false. According to his own personal experience, extending to nearly half a century, during twenty-four years of which period he has had almost unprecedented opportunities of observing the malady in all its phases, he is forced to the conclusion that Dr. Debove simply misinterpreted the cases that came under his notice. The subject of the contagiousness of pulmonary phthisis was also fully discussed last winter by the Medical Society of Mentone, of which Dr. Bennet was President, and the members unanimously concluded that, admitting the possibility of the contagion of tuberculosis, it was so only in exceptional cases and under very special circumstances. That there was no danger of living with tuberculous patients even in the same room, provided the latter be well ventilated, but a person in health should on no account sleep in the same bed with a consumptive patient.

A league against vivisection is being organized in Paris, of which Victor Hugo has been elected Honorary President. The society, at present, is composed principally of ladies, newspaper writers, and literary characters, and the list of the members which has as yet been published is not a very long one.

Two new asylums for rickety and otherwise deformed children are to be established in the most populous districts of Paris, under the patronage of the Municipal Council. These institutions, which are to be designated "Écoles-dispensaires," will partake of the character of an infirmary and a school where the children will have the medical or surgical attendance required by their condition, and at the same time receive the education suited to their age and mental capacity.

The ambulance scheme for street accidents, submitted more than two years ago by Dr. Nachtel to the municipal authorities of Paris, has only now received official sanction. The entire plan proposed by Dr. Nachtel is to be carried out, but it will perhaps take three years at least before we see anything of it.

Long ere this reaches you the Count de Chambord, one of the noblest princes that ever lived, will perhaps be no more. His malady seems to be of such a complex nature as to defy the diagnostic powers of such men as Billroth, Drasche, and Bamberger, who have been summoned to Frohsdorf, the Count's residence, to meet the regular medical attendant, Dr. Meyer, in consultation. Although they have been more than a week in attendance, they are not yet fixed as to the precise seat or nature of the malady before them. The seat, however, is said to be in the gastric region, where a tumor is felt, but the nature of the latter has not yet been ascertained. But, judging from the symptoms present: inappetence, frequent vomiting, and rapid emaciation, the tumor is evidently of a malignant character. This opinion has been emitted by the consultants, but they still hesitate between cancer and simple abscess, and even retrocedent gout has been mentioned in the nomenclature of the diseases from which the illustrious patient is said to be suffering. The medical men are, however, agreed as to the extreme gravity of the case, and everything seems to portend a fatal issue, the accomplishment of which is only a question of a few days, or, perhaps, only hours. The medical men in attendance are all foreigners, and it has been remarked that no physician or surgeon has been summoned from Paris.

[According to a cable despatch, Professor Vulpian has examined the distinguished] patient and has failed to find any tumor.—ED.

AMERICAN HOSPITALS.—M. Poncet, in *Lyon Medical*, says "that nowhere has he seen in Europe a finer outfit than that of the New York Hospital and the Boston City Hospital. If no country can compare with France in ease and comfort, it is nevertheless true that in relation to certain hygienic conditions we ought to imitate what is done elsewhere, and especially in America."

Reports of Societies.

AMERICAN OTOLOGICAL SOCIETY.

Sixteenth Annual Meeting, held at Hotel Kaaterskill, Catskill Mountains, July 17, 1883.

Morning Session.

The Society was called to order at 10.30 A.M., by Dr. J. S. Prout, of Brooklyn, N. Y., Vice-President, the President, Dr. J. Orne Green, of Boston, Mass., being absent on account of sickness in his family.

Business Committee—Drs. E. Dyer, of Pittsburg, Pa.; E. W. Bartlett, of Milwaukee, Wis., and F. B. Loring, of Washington, D. C.

Committee on Membership—Dr. E. Dyer was added *pro tem.* to this committee, because of the absence of Dr. H. G. Miller, of Providence, R. I.

The Treasurer, Dr. J. Y. B. Vermyne, of New Bedford, Mass., read his report, which was referred to Dr. G. Strawbridge, of Philadelphia, for auditing, who subsequently reported that the accounts were correct.

Dr. Bartlett, Chairman of the Business Committee, announced the bulletin. The first paper was read by Dr. W. W. Seely, of Cincinnati, O., entitled

A CASE OF PRIMARY EPITHELIOMA OF THE AURICLE—REMOVAL OF THE ENTIRE AURICLE BY THERMO-CAUTERY.

The patient was a male, sixty years of age, who, six years ago, was bitten on the ear by a rat. The wound never healed, but finally developed the growth removed. During the last year it had increased in size rapidly and bled easily on irritation. The original wound was near the summit of the helix. The tumor was removed by means of the thermo-cautery, the hemorrhage being only slight. The entire surface of the stump was covered with a thick layer of powdered boracic acid, and the patient was sent home within five weeks with a perfect scar. Dr. Seely regarded primary epithelioma of the auricle as rather rare. Although in this case the thermo-cautery acted well, he thought that the knife with torsion of the arteries was a preferable method. He also believed that under the boracic acid treatment the healing period of the wound was reduced at least one-half.

Dr. Knapp, of New York, thought it rare for epithelioma to arise from trauma.

Dr. Seely thought it generally accepted that epithelioma might be due to trauma, and asked what Dr. Knapp would regard as the cause in cases of epithelioma of the lip supposed to be due to using clay-pipes, etc.

Dr. Knapp said that the pipe might produce constant irritation of the lip, but he thought that it was not exactly traumatism.

Dr. Seely regarded it as the perfection of trauma. The special point of interest in his specimen was its occurrence in a region where neither traumatism nor epithelioma is likely to develop.

INVITED GUESTS.

Dr. Strawbridge, of Philadelphia, introduced Drs. Andrews and L. Webster Fox, of Philadelphia, and they were invited to attend the meetings of the Society.

A paper "On the Intermittent Perception of Sound, as Conveyed through the Air and the Cranial Bones, with a Brief Summary of the Results of Treatment in Chronic Aural Affections with Impaired Hearing," by Dr. J. A. Andrews, of Clifton, Staten Island, was read by title and referred to the Committee on Publication.

Dr. Andrews then read a paper on

THE RECOGNITION OF BRAIN COMPLICATION IN AURAL AFFECTIONS,

which contained the clinical histories, together with the record of five autopsies, after death from brain disease secondary to ear disease, under his own observation. Special attention was directed to the condition of the eye, and in all his cases the ophthalmoscope revealed either papillitis or a hazy, slight œdematous appearance of the optic-nerve disk, very valuable corroborative evidence of a cerebral complication, especially where the other symptoms were obscure. Dr. Andrews believed that most ophthalmologists would endorse the statement that optic neuritis and central vision of $\frac{1}{10}$ were not incompatible. The existence of a cloudy disk in cases of ear disease should excite suspicion, and he believed that the condition of the optic-nerve disk furnished evidence which has not received the attention it deserves. In the majority of reported cases the condition of the eye is only incidentally referred to. In one case there was a cerebral abscess which Dr. Andrews thought had undoubtedly existed for twelve years. It was also a significant fact, in connection with cerebral localization, that abscess secondary to ear disease is usually in the medullary substance and seldom in the cortex. The significance of special symptoms, as vertigo, vomiting, headache, more continuous and less paroxysmal than with brain tumor, œdema over the mastoid, etc., were considered. Fever was very often absent. The sight was most affected on the side of the brain lesion.

Dr. Kipp, of Newark, N. J., had published a number of cases in which eye-symptoms were present, and also stated that Dr. Knapp had since published several. Dr. Kipp's published cases preceded those reported by Zaufel.

Dr. Seely, of Cincinnati, had examined the eyes with the ophthalmoscope in cases of suppurative middle-ear disease, but so far with negative results, and he thought that definite results had not yet been obtained in that direction.

Dr. Strawbridge, of Philadelphia, said that after Dr. Roosa directed attention to this subject at the last meeting, held at Newport, he had examined the eyes of all his patients suffering from suppurative middle-ear disease, but without satisfactory results. He had also made an analysis of the urine and had frequently found large quantities of albumen present when brain complication existed.

Dr. Kipp said he had continued his observations and had found, in cases in which meningitis is present, that there was almost always a change in the fundus something like optic neuritis; something between œdema and actual inflammation of the nerve. The change had been claimed only for those cases in which cerebral complications existed.

Dr. Andrews said he alluded only to those cases in which brain complications were suspected. In all his reported cases he had examined the urine with negative results.

Dr. Seely did not donbt that, in cases of actual brain complication, more or less evidence would be found in the fundus oculi, but in such cases the ocular symptoms are less important than in those where the question of diagnosis is doubtful, or in the cases of suppurative middle-ear disease as they are generally seen. He had seen two or three cases in which there were marked changes in the eye on the side of the affected ear, but these passed away and he was left in doubt whether there was very much affection of the brain.

Dr. Kipp believed that optic neuritis might exist with ear trouble and pass away as the cerebral affection ceased.

Dr. Bartlett, of Milwaukee, regarded ophthalmoscopic examination as very valuable in the acute stage of meningitis. A slight cloudiness of the fundus indicated that degeneration of the parts of the brain involved has not yet taken place, but when the degeneration has begun the appearances in the eye disappeared, sight improved, etc. For the alienist, therefore, such examinations were important.

Dr. Sexton, of New York, asked if the ophthalmoscope had been found of service as a means of diagnosis

where other symptoms have not been prominently observed, especially in fatal cases of meningitis and cerebral abscess.

Dr. Kipp had examined many hundreds of cases of otitis media, and had not found any cases with eye symptoms in which there were not other symptoms of brain complication.

Dr. Knapp thought that the ophthalmoscope sometimes gave most valuable evidence, more so than could be obtained from the patient. In one of his published cases the œdema was very slight, while the pain and other subjective symptoms were marked and had existed for some time; but as soon as the symptoms became severe and pointed toward a fatal termination, the optic disk was swollen first upon one side and then upon the other. The recession of the ocular appearances had guided him with regard to allowing the opening made in the mastoid to close, and in just these cases ophthalmoscopic examination had been of great value. When the optic disk gets normal, and the discharge from the mastoid is slight, he thought the opening could with safety be left to close, and he thought he had, in this way, abridged the period of healing materially.

The paper was further discussed by Drs. Sexton, Strawbridge, Seely, Knapp, and Kipp.

A paper by Dr. Sexton, of New York, entitled "External and Internal Inflammation of the Mastoid, with Cases," was read by title and referred to the Committee on Publication.

Dr. Read J. McKay, of Wilmington, Del., then reported a case of

ACUTE DESQUAMATIVE INFLAMMATION OF THE EXTERNAL AUDITORY CANAL—ACUTE OTITIS MEDIA—MASTOIDITIS AND CHRONIC MENINGITIS—RECOVERY.

Dr. Charles H. Burnett, of Philadelphia, read a paper entitled

A CASE OF MASTOID DISEASE—ARTIFICIAL PERFORATION OF THE BONE—TEMPORARY RELIEF—DEATH FROM PYÆMIA.

The paper contained an account of a case of chronic purulent inflammation of the middle ear inducing general increased vascularity of the pyramidal part of temporal bone, hyperostosis of the outer wall of the mastoid groove without necrosis. The mastoid cavity became filled with cheesy débris, and this furnishing a pyæmic source of embolism, was followed by embolism of a chronic form, as shown first by abscesses in the lung and then by infiltration of the liver with abscesses.

Dr. Burnett also expressed the opinion that the operation of trephining the bone is comparatively unattended with danger, and affords the one slim chance of escape from death in cases of true mastoid disease, which must necessarily furnish an embolic source for the products of inflammation, purulent, and cheesy débris pent up in the mastoid cavity. In such cases there are the chances of death from embolism, while there are none from the operation. In the case reported by Dr. Burnett, the patient survived the mastoid operation two weeks, and the wound nearly healed, when the man was seized with a chill and rapidly sank from embolic hepatitis.

These papers gave rise to an extended discussion concerning trephining the mastoid when involved as a complication in middle-ear disease.

Dr. Strawbridge, of Philadelphia, had never performed the operation upon the living subject. He had seen about five thousand cases of purulent middle-ear disease during the last twelve years, and had not had occasion to trephine a single mastoid. Nor had he had but a single death, which occurred in a child six months old, that died a few hours after he first saw the case. In studying the subject he had been struck with the very small percentage of cases in which pus was found after the bone had been trephined. He would like to ask if the absence of pus was not evidence that the operation had not been ndicated.

Dr. Knapp, of New York, said that the mastoid had been trephined with marked benefit in quite a number of cases in which pus was not found. Such cases had been reported by Hartmann and also by himself. His firm conviction was that, when chronic middle-ear disease, even without suppuration or perforation, was attended with more or less obstinate constant pain which has its origin in the mastoid process and radiates from there over the corresponding half of the face and side of the head, trephining the mastoid is indicated.

Dr. Sexton, of New York, had not seen so many cases requiring opening of the mastoid as had been mentioned by several authorities, as Buck, Schwartze, and others, and only a very few in which he had thought the operation might be necessary, without some further evidence than the pain in the mastoid. He thought there might be danger in attributing too much importance to pain as a symptom in these cases. With regard to operative procedure it had occurred to him to have the opportunity to liberate the pent-up secretion through the posterior wall of the auditory canal, and he thought that, in a large majority of cases, pointing takes place in that direction rather than toward the brain. He regarded early constitutional treatment as especially important, particularly by the use of the sulphide of calcium, of which he seldom, of late, had given more than one-tenth of a grain at a dose, and frequently a much smaller quantity, repeating it perhaps every one or two hours. Of course the liberation of pus when formed was a well-established surgical procedure and must not be ignored.

Dr. Theobald, of Baltimore, said that his experience had been similar to Dr. Strawbridge's, and so far he had opened the mastoid only upon the dead subject. He did not believe that the indications for performing this operation occurred very frequently. Early constitutional and local treatment he thought would have cured most of the cases in which the mastoid had been opened. He regarded leeches as exceedingly serviceable.

Dr. Kipp, of Newark, N. J., thought that the operation was essentially harmless, and believed it to be better to operate and not find pus than to allow the case to go on and the patient die with pus in the mastoid cells where by an operation it could have been removed. He maintained that there were cases in which suppuration occurred in the mastoid, irrespective of constitutional treatment.

Dr. Bartlett, of Milwaukee, had not found it necessary to trephine the mastoid. He had relied on poultices applied every half hour, as hot as the patient can bear, and had seen several cases in which pointing took place within twelve hours, and the pus was then let out with an ordinary scalpel, cutting through into the mastoid.

Dr. Strawbridge corroborated Dr. Bartlett's experience concerning the value of poultices.

Dr. Burnett thought that poulticing could not produce much effect upon the mastoid cells if the external wall of the process is intact.

Dr. Jones, of Chicago, thought no general rule could be laid down, but that each case must be treated independently, according to conditions present.

Dr. E. E. Holt, of Portland, Me., had had forty cases of mastoid disease in two thousand cases of ear disease of all kinds. He had not perforated the mastoid, and had not had but three deaths, all of which could be explained without reference to the condition of the mastoid. He had used leeches more than any other measure, unless it was incision.

The subject was further discussed by Drs. Sexton, Burnett, and Knapp.

Dr. E. E. Holt, of Portland, Me., then read a paper in which he reported a case of

TERATOID TUMOR OF BOTH AURICLES,

having a clinical history of recurrent fibroid. The patient was a woman, twenty-nine years of age, of light complexion and good average health. These morbid

growths were of unusual interest in the following respects: 1, they promptly followed perforation of the lobe and wearing of gold ear-rings; 2, they have repeatedly occurred during a period extending over twenty years; 5, they have undergone remarkable change in structure. In proof of this latter assertion a portion of a letter was read from Dr. John H. Ripley, of New York, who had removed the tumors several times, and who stated that they contained nothing but dense interlacing fibrous tissue. An exhaustive examination of the recent growths, by Dr. Edward Preble, of Portland, Me., determined, however, that the said tumor contained germinal matter in abundance with the following tissues, namely: myxomatous and adenoid tissue, giant-cells, fibro-plastic tissue, loose areolar tissue with infiltrated fat, innumerable elastic fibres, fine and coarse fibrous tissue, hyaline reticular and fibro-cartilage, smooth muscle, fragments of large blood-vessels, well-developed skin with corium, papillæ, rete mucosum and epidermis, hair-follicles, hair and sebaceous glands, together with certain unclassifiable structures.

Drs. F. D. Spier, of Brooklyn, and John Van Duyn, of Syracuse, N. Y., were

PROPOSED FOR MEMBERSHIP,

after which the Society adjourned to meet at 7.30 P.M

Evening Session.

The Society was called to order by the Vice-President, Dr. J. S. Prout.

Drs. L. Webster Fox, of Philadelphia, and Swann M. Burnett, of Washington, D. C., were

PROPOSED FOR MEMBERSHIP.

Drs. Murdoch, of Baltimore; Williams, of Boston; and R. H. Johnson, of Philadelphia, were introduced and invited to remain in attendance.

AMENDMENT TO THE BY-LAWS.

Dr. John Green, Chairman of the Committee on Membership, offered the following: The first by-law, relating to the election of members, shall be amended so as to read "after the report of this committee has been received, *and at the same meeting*," etc.

Dr. Sexton, of New York, presented a patient who had formerly been under his care for

CHRONIC INFLAMMATION OF THE MASTOID CELLS WITHOUT PERFORATION OF THE MEMBRANA TYMPANI.

When under his treatment the case was complicated with ozena.

This case opened the discussion again on the question of trephining the mastoid, which was participated in by Dr. Gruening, of New York, who argued very strongly in favor of the operation, Drs. Kipp, Bartlett, Theobald, Burnett, Sexton, and Webster.

Dr. E. E. Holt, of Portland, Me., then read a paper entitled

OBSERVATIONS ON THE HEARING POWER IN DIFFERENT CONDITIONS,

in which was given the results of examination of four series of cases: 1, twenty-four cases of chronic non-suppurative otitis media from private practice; 2, twenty-four machinists; 3, twenty-four boiler-makers; and 4, twenty-four persons with normal ears.

The hearing power was tested by the voice, tick of a stop-watch, tuning-fork, and Kœnig's rods, and the average age ratio of bone to aërial conduction and the audibility of Kœnig's rods in three series of tests were compared with each other and with the normal ear. It was ascertained that the ratio between bone and aërial conduction diminishes in a corresponding degree to that of the hearing power for the voice, and that the average audibility for the upper limit of Kœnig's rods was quite equal to the average normal of 40,000 V. S., as determined by Dr. Blake; therefore the conclusion was drawn that the loss of hearing in the machinists and boiler-makers was due much more to a defect in the conducting than in the perceptive part of the organ of hearing for the following reasons: 1. Because of history or present condition of catarrh of the middle ear and naso-pharynx. 2. Because the tuning-fork when placed vibrating in the centre of the teeth, was heard louder and longer in the more affected ear, and the sound of it was invariably increased by pressing on the tragus and closing the meatus. 3. Because, had there been any considerable disease of the labyrinth, they would not have responded so nearly to the normal average audibility for the upper limit of Kœnig's rods, since such an astute observer as Dr. Blake, who has made extensive use of them, has never had a case of labyrinth disease without a "*marked loss of hearing* for the Kœnig's rods."

In regard to hearing in a noise, several of the three series of persons made a voluntary statement that they could not hear better in a noise. These were carefully tested in a quiet place and then in a noise, and in every instance there was no improvement of hearing in the noise; on the other hand, when the voice was used at the same time it was not heard quite as well in the noise as in a quiet place.

Dr. Kipp, of Newark, N. J., read a paper entitled

ON THE ASSOCIATION OF AURAL DISEASE WITH SIMPLE SPARKLING SYNCHISIS OF THE VITREOUS HUMOR.

In six of the seven cases of synchisis of which he has record aural symptoms were present; in the seventh case it is not known whether or not ear trouble existed. In five of the cases the synchisis scintillans existed in only one eye, and in two of these the ear of the same side only was affected; in the other three both ears were diseased. In four of the cases the ear-trouble was probably situated in both the middle ear and the nervous apparatus. In one case there was chronic suppuration of the middle ear, which had been preceded for years by impairment of hearing without otorrhœa. In the sixth case there was absolute deafness of the one ear since infancy. Otological literature contains no record of similar cases, and the author thinks that the association of the two affections in his cases may have been merely accidental. They are published with a view of inducing others to examine their cases of synchisis for aural trouble, and thus settle the question.

The paper was discussed by Dr. W. S. Little, of Philadelphia, and Dr. Webster, of New York.

A paper by Dr. Charles A. Todd, of St. Louis, on "Anomalous Sebaceous Gland in Immediate Proximity to the Auricle," was read by title and referred to the Committee on Publication.

Dr. Sexton, of New York, then read a paper (see p. 90) on

THE SIGNIFICANCE OF THE TRANSMISSION OF SOUND TO THE EAR THROUGH THE TISSUES IN AURAL DISEASE.

It was discussed by Drs. Burnett, Holt, Andrews, and Kipp.

Dr. Sexton then exhibited fourteen photographs of various forms of ear affections; also two ear-syringes, together with a *hooked curette* for removing foreign bodies from the ear, where it is necessary to use forceps.

Dr. H. Knapp, of New York, read a paper on

OBSTINATE PURULENT DESQUAMATIVE OTITIS MEDIA,

in which he reported a case that was finally cured. He laid special stress upon the fact that when there is desquamative otitis media palliative treatment produces only temporary benefit, and that to effect a cure it must be converted into an acute case that will produce a condition that can be cured. The case was a new confirmation of views which he expressed before the Society two years ago concerning the treatment of granulations and polypi. He then stated that in cases of diffuse

granulations, and broad sessile polypoid excrescences he abstained from destroying them by caustics or sharp instruments, because these procedures are likely to destroy essential parts of the drum-cavity, and terminate in replacing the mucous membrane by cicatricial tissue, thus bringing about an unpleasant condition known as sclerosis. The only reasonable plan is to change the condition of the parts, and this he accomplishes by instillations of warm water and keeping the parts moist by applying cotton steeped in glycerine. A somewhat prolonged discussion followed on the question whether or not a new drumhead is ever actually formed after being destroyed by disease.

The Society then went into executive session, and afterward adjourned to meet in 1884.

New Members—Dr. W. S. Little, of Philadelphia; Dr. B. E. Fryer, U.S.A., Fort Leavenworth, Ks.; Dr. R. O. Born, of New York; and Dr. J. A. Lippincott, of Pittsburg, Pa.

President—Dr. Charles H. Burnett, of Philadelphia, Pa.; *Vice-President*—Dr. J. S. Prout, of Brooklyn, N. Y.; *Secretary and Treasurer*—Dr. J. J. B. Vermyne, of New Bedford, Mass.; *Committee on Membership*—Drs. John Green, of St. Louis, Mo.; H. G. Miller, of Providence, R. I., and A. Matthewson, of Brooklyn, N. Y.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at Kaaterskill, N. Y., July 18 and 19, 1883.

WEDNESDAY, JULY 18—FIRST DAY—MORNING SESSION.

THE Society was called to order at 10 A.M. by the President, DR. HENRY D. NOYES, of New York, who made a few congratulatory remarks and then appointed the following committees:

Committee on Bulletin.—Drs. F. B. Loring, of Washington, and E. W. Bartlett, of Milwaukee.

Business Committee.—Drs. John Green, of St. Louis; E. Gruening, of New York; O. F. Wadsworth, of Boston; S. Theobald, of Baltimore, and E. Dyer, of Newport.

The Treasurer's report was read and referred to Dr. David Webster, of New York, who subsequently reported that all the accounts were correct. The report was adopted.

CANDIDATES FOR MEMBERSHIP.

The following were nominated: Drs. Charles S. Turnbull, of Philadelphia; Miles Standish, of Boston; J. L. Thompson, of Indianapolis; W. T. Bacon, of Hartford; Stephen O. Ritchie, of Washington, and John Van Duyn, of Syracuse.

NEW MEMBERS.

The following were elected: Drs. B. E. Fryer, U. S. A., of Fort Leavenworth, Ks.; J. A. Andrews, of Clifton, Staten Island; L. Webster Fox, of Philadelphia; J. A. Lippincott, of Pittsburg; J. L. Minor, of New York; and E. E. Holt, of Portland, Maine.

INVITED GUESTS.

The following were invited to attend the sessions of the society: Drs. T. Y. Sutphen, of Newark, N. J.; R. H. Johnson, of Philadelphia; Miles Standish, of Boston, and Swann M. Burnett, of Washington.

The Secretary, DR. R. H. DERBY, of New York, read the *resignation* of Dr. Thomas J. Morton, of Philadelphia, which was accepted.

INFLUENCE ON REFRACTION OF FOUR YEARS OF COLLEGE LIFE; ILLUSTRATED BY STATISTICS OF THE LAST FOUR CLASSES GRADUATED FROM AMHERST COLLEGE.

A paper on the above subject, sent by DR. HASKET DERBY, of Boston, was read by Dr. Miles Standish, of Boston.

The author had been able in 254 instances to trace the refraction through the whole term of four years. The examinations were all personally conducted with glasses, and in the majority of cases, certainly in all doubtful ones, with the ophthalmoscope. The results given are those obtained by glasses. The use of atropine was entirely impracticable, as the students could not have been allowed even temporarily to be disabled from the active prosecution of their studies. Dr. Derby followed the example of Emmet and Loring in stating degrees of ametropia as slight as O. 5 D., and included nothing less. The average age of those examined was at entrance 19 years, at graduation 23. The number of cases was small, it is true, but it is one of the few attempts yet recorded to trace the movement of refraction among the more highly educated during this particular period of life and for a continuous term of years.

The general results were, hypermetropia at entrance, 39, at graduation, 47; myopia at entrance, 90, at graduation, 120; emmetropia at entrance, 125, at graduation, 87.

Analyzing the ametropia he found under the head of manifest hypermetropia, of which there were 39 cases at entrance, 1 changed to myopia, 2 diminished, 27 remained stationary, and 9 increased in amount.

Of the myopia there were 90 cases; 32 remained stationary, 58 increased in amount.

The observations concerning emmetropia possessed peculiar interest, the results somewhat militating against theories that have found general acceptance. There were at the time of entrance 125 cases of emmetropia. Of these 86 remained emmetropic, 10 developed hypermetropia, and 29 developed myopia. The average age of those thus developing myopia was very nearly nineteen at entrance, twenty-three at graduation. The average myopia developed amounted to nearly 1 D. (0.982).

So far as these figures go they tend to show, first, a large amount of myopia, even in this country among the educated classes. The author said it was difficult to compare Dr. Loring's figures with his own, because Dr. L.'s statistics were based upon observations made between the ages of six and twenty-one, and his observations were made between the ages of eighteen and twenty-three. But all researches at the latter age go to prove that one-half, or very nearly, of the educated community is myopic in this as well as in other countries. Moreover, contrary to the impressions so long entertained, myopia may be acquired at or near twenty years from the same causes that produce it at an earlier age, and it may continue to progress until the course of study is completed.

The paper was discussed by Drs. Webster and Mittendorf, of New York; Gruening, of New York (who directed special attention to the use of the term dioptric, urging that some uniform mode of spelling be adopted); Carmalt, of New Haven; Little, of Philadelphia, and Hutchinson, of Utica.

SOME IMPROVEMENTS IN INSTRUMENTS AND APPLIANCES FOR CATARACT OPERATIONS.

DR. RUSSELL MURDOCH, of Baltimore, read a paper with the above title. He exhibited an ophthalmostat, or a self-holding eye-forceps, and an eye-speculum, which were modified from those exhibited to the Society in 1874. The distinguishing features of the speculum were "absence of spring and set screw." The change in the ophthalmostat was such that it seized the conjunctiva in a vertical fold, and rotated the eyeball without dragging it, and the substitution of three little hooks for one pair, which secured greater steadiness.

The new instruments consisted, first, in the combination of Graefe's knife, end to end, with Wecker's scissors. Second, a combination of iris forceps with the cystotome and shell spoon. The advantages claimed for these instruments were that an assistant is dispensed with,

and that seven instruments are reduced to three in performing the modified linear extraction of cataract.

Dr. Murdoch also exhibited a bandage which could be quickly made and easily applied.

Dr. Gruening, of New York, thought that outside of the limits of civilization such complicated instruments might be useful, but that within the limits they should be discarded entirely, and that a cataract operation should not be undertaken without an assistant. Concerning the bandage, he said, an ordinary flannel bandage could not be replaced by anything which had yet been brought forward. No bandage can produce the pressure that can be applied by the use of the flannel roller. It is necessary to immobilize the eye, and this cannot be done by any substitute for the ordinary flannel bandage.

The President remarked that he had had some experience in the use of the little forceps in fixation, and had long ago discarded the instrument, because it did not give so much control over the eye as one might imagine. He had reached the conclusion that the operator's hand should guide the forceps.

Dr. Murdoch remarked that he was well aware the gentlemen in New York could obtain an assistant at any time, but he thought there were occasions outside where it was impossible to secure an assistant, and that the instrument had been devised especially to meet such emergencies.

Dr. Theobald, of Baltimore, believed that the eye could not be immobilized by any bandage whatever which was at all permissible, and that there was a decided objection to the long flannel bandage, especially during hot weather.

Dr. Gruening said he would not insist upon the flannel bandage, but that he would insist upon the long bandage, and of late he had used gauze, dipping it into water before applying it. He believed that the eye could be perfectly immobilized if the bandage were properly applied. The first thing to be done is to fill up the orbital depression, so that when the hand is placed over it the brow and the bridge of the nose are not felt, but that the hand rests entirely upon the pad, and upon that pad pressure with the bandage can be made which will render the eye entirely immobile.

Dr. Theobald thought if Dr. Gruening would apply the bandage in the manner described to his own eye he would find that the eyeball had not been rendered immobile.

Dr. Henry S. Schell, of Philadelphia, reported a case of

TUBERCLE OF THE IRIS.

The patient was a boy nine years of age, who applied for treatment at the Will's Eye Hospital, August 29, 1881. The left eye had been painful for four days, and exhibited the general signs of ordinary plastic iritis. Atropine and mercurial ointment were prescribed. On the 16th of September no effect had been produced by the treatment. In the latter part of October the boy came to the Children's Hospital suffering from well-marked coxalgia in the second stage. There was a distinct history of phthisis on the mother's side. The left eye was still somewhat painful. The pupil was immobile, and there was a ring of circumscribed injection, and projecting from the nasal side of the pupillary margin was a small yellowish-white nodule the size of a pin's head and tinged with pink. This nodule gradually increased in size. The hip-joint disease progressed The eye was enucleated, and was examined by Dr. G. B. Lawrason, of New Orleans, who reported that it consisted of two or three tubercular masses embedded in inflammatory product. The tubercles seemed to have developed in the organized inflammatory product, which nearly filled the anterior and posterior chambers.

The President said that within the last year a case had been under observation in New York which illustrated the difficulties in diagnosis. The patient was four years of age, and the gross appearances presented by the eye were absolutely indistinguishable from a glaucomatous condition or a metastatic choroiditis. The patient continued under observation for several weeks without much progress in the disease. The eye was then enucleated, and tubercular disease was found to be the true nature of the lesion. It was felt at the time by those who examined the patient that, in some cases, the differential diagnosis between glaucoma and tubercular disease is impossible.

TUBERCULOSIS OF THE CILIARY MUSCLE AND IRIS.

Dr. O. F. Wadsworth, of Boston, reported a case of the above character occurring in a girl three and a half years old. Dr. Hasket Derby, of Boston, saw the patient when the process had lasted two weeks, and regarded it as a case of kerato-iritis. The pupil contracted and remained so in spite of atropia; the cornea was hazy; the lids were natural. Afterward, when Dr. Wadsworth saw the patient the cornea was hazy, the conjunctiva was moderately congested, there was no marked ciliary congestion, there was good anterior chamber, and the pupil was of good size. The patient died about six months afterward. The eye after it was removed contained a mass about six millimetres in thickness. The vitreous was replaced by serous fluid, there was nothing of the lens to be seen. The iris and choroid were in place and behind the mass. Microscopical examination, made by Dr. Ernst, of Boston, revealed that the growth was tubercular in character, and he was also able to demonstrate the presence of bacilli. There was no evidence of pulmonary disease. It was learned late in the history of the case that the father and the father's brother died of phthisis, and that other members of the family were subject to bronchial attacks, so called.

The paper was discussed by Drs. Prout, of Brooklyn, and Webster, of New York.

Dr. S. F. McFarland, of Oxford, N. Y., read a paper which contained

A PERSONAL EXPERIENCE WITH PRISMATIC GLASSES.

During his boyhood he had a slight divergence, occurring and disappearing at times, although seldom sufficient to attract attention. Still he had the full use of his eyes, could judge of distance as well as others, and was even expert in the sports of youth requiring binocular vision. He had no inconvenience during his studies, always enjoying the greatest comfort during the most severe and protracted application. During the autumn of 1862 he contracted typho-malarial fever in the army, and after recovering from this he found that he had lost the full and comfortable use of his eyes, which continued with the usual pain and annoyance attending a futile effort to use both eyes in conjunction, and he was compelled finally to discontinue reading almost entirely until in January, 1866, he consulted Dr. H. D. Noyes, who gave him plain prisms of seven degrees each, bases inward, for distance, and eight degrees each with plus thirty-six spherical for reading. At that time he had been nearly three years unable to obtain binocular vision even for a moment, but at once he was able to see distinctly. He has never discontinued their use, they have been varied from time to time, but he has always adhered to the prisms. He suffers the inconvenience that he cannot maintain continued binocular vision, but can obtain and retain it long enough for an iridectomy, or the extraction of a cataract, and even during very protracted operations, although at the expense of pain and very distressing lassitude following the effort. Without the prism he could not do these things, inasmuch as slight differences in distance would not be appreciable. With bifocal sphero-prismatic-glasses he is able to do all his office work without changing, and with a reasonable amount of comfort.

Dr. R. J. McKay, of Wilmington, Del., said that a music teacher came to him in September, 1879, who, while standing directly in front of his class and moving

his eyes from right to left extremely without moving his body, weakened the external recti. Dr. McKay ordered prisms with the bases external, which the patient had worn ever since with comfort for distance only.

Dr. O. F. Wadsworth, of Boston, then read a paper

ON THE APPARENT CURVATURE OF SURFACE PRODUCED BY PRISMS.

The phenomenon is very familiar that when we look through prisms with the bases inward, with a plane surface, the surface appears convex, and with the bases outward the surface appears concave. He had not met with any exception to this phenomenon, and the communication was intended to explain it, and was the theory which had been worked out by Dr. Pierce. It was illustrated with diagrams.

Dr. S. W. Burnett, of Washington, on invitation, presented a specimen of

TUBERCLE OF THE CHOROID,

accompanied with the clinical history of the case, which occurred in a colored girl fifteen years of age.

Dr. J. A. Spaulding, of Portland, Me., then read a paper in which he reported a case of

SYMPATHETIC NEURO-RETINITIS.

The author first referred to the able works of Mauthner and Kneis, whose views are so diametrically opposed, the latter believing that the so-called cases of sympathetic neuro-retinitis are open widely to criticism. It seemed desirable, therefore, to publish, and thus to offer to careful criticism, every case of apparent sympathetic inflammation of the retina and optic nerve (either alone or conjoined), and above all does this appear necessary when we have, as at present, to offer one in which so far as accurate and repeated examinations have availed, the retina and optic papilla of one eye underwent inflammation after an injury to its mate, while at no time from the beginning of the case were there ever any visible signs of inflammation of any portion of the uveal tract. The patient was a Danish woman, fifty-six years of age, and healthy in every respect. On January 6, 1883, she was struck in the eye by the horn of a cow, which rendered her at once and forever totally blind in that eye. The patient saw a flash of light and then the sight was gone. Eleven weeks after the injury to the right eye the patient, much reduced in health on account of the pain and irritation in the right eye and its neighborhood, came to Dr. Spaulding for consultation. On March 30th, about four weeks after first seen, the right eye was enucleated on account of the excessive pain from which the patient was suffering. The operation was followed by excessive hemorrhage, which could not be checked by pressure or hot water, and only ceased after ligature of the artery deep in the orbit, and of a second one which appeared to spring from a band of connective tissue uniting the globe and upper eyelid. The case subsequently progressed favorably, and the patient was sent home. No medicinal treatment was adopted. The result appears to justify the opinion of the truly sympathetic nature of the neuro-retinitis in the left eye, for the sight gradually returned to the remaining eye. The pain in the head disappeared with considerable rapidity. July 14, 1883, examination with the ophthalmoscope revealed normal left eye, vision $\frac{20}{20}$. The enucleated eye was lost. The presence of this neuro-retinitis with total loss of vision in the eye five weeks after an injury to the other, and without any other visible or possible cause, such as idiopathic iritis, syphilis, cerebral lesion, etc., indicates the sympathetic nature of the disease. Iritis was excluded in any form as the possible cause of the difficulty in the left eye.

Dr. Webster, of New York, said he had reported two cases of sympathetic neuro-retinitis in which he enucleated the eye giving rise to the trouble and with excellent results. The neuro-retinitis subsided, and the eye recovered with much better vision than existed before the operation was performed.

Dr. Prout, of Brooklyn, said, concerning the hemorrhage in Dr. Spaulding's case, that in one instance, after resorting to various methods unsuccessfully, he arrested the hemorrhage by digital pressure with the finger in the orbit.

Dr. Mittendorf, of New York, had employed sponge-pressure, that is, applying a good-sized, soft, moist sponge over the orbit, and securing it with a roller bandage after enucleation, to be worn for twenty-four hours, then changed and worn for the next twenty-four hours, and he had never experienced any trouble from hemorrhage or from infiltration of the lids or the orbital tissues.

Dr. H. W. Williams, of Boston, said he had never had any difficulty in arresting hemorrhage by means of the sponge-tent, and was unable to see how it is possible for hemorrhage to go on if the orbit was properly plugged in that way. However, since he had adopted the circular suture of Bowman, he did not recollect of having had a case where it was necessary to apply the sponge-tent.

Dr. Prout thought the removal of the tent would be exceedingly painful.

Dr. Williams remarked that the patients did not like it at all, but the pain could be reduced to its minimum by removing the sponge very quickly.

Dr. Dyer, of Newport, while in charge of an army ward, had between two hundred and twenty-five and two hundred and fifty cases of enucleation, and in not a single one did he experience any annoyance from hemorrhage. He always used a large sponge from which ice-water was gently squeezed into the orbit, rarely for more than ten minutes, and afterward applied a double thickness of linen, covering it with one thickness of bandage.

Dr. Green, of St. Louis, referred to a case in which ice-water and digital pressure had been employed without success, and finally he tamponed the orbital cavity with a narrow strip of linen and made external pressure with a bandage, which controlled the hemorrhage. The tampon was allowed to remain twenty-four hours, when it was removed without difficulty by a process of unravelling, as it were. He subsequently learned that the patient had a hemorrhagic diathesis.

Dr. Knapp, of New York, referred to a procedure for avoiding hemorrhage after enucleation, and it was to keep close to the sclerotic. If this precaution is observed there will be very little danger from hemorrhage. The most profuse hemorrhage occurs when the optic nerve is cut, because we are likely to go into the naturally cavernous tissue of the organ, but the division can be made without undue loss of blood by pressing the speculum into the orbit and allowing the eyeball to pop out, as it were, which will facilitate the division of the nerve and removal of the ball very materially.

The President had never had but one case of serious hemorrhage which required digital pressure. He had had one case of enucleation of the eyeball for a tumor in the antrum, and in which the bleeding was so profuse that it was necessary to tampon the cavity with the ordinary kite-tail tampon made of pledgets of lint. The tampon was effectual and was readily removed.

The paper was further discussed by Drs. W. W. Seely, of Cincinnati, and F. Buller, of Montreal, Canada.

Dr. David Webster, of New York, then reported

THIRTY-FIVE CASES OF CATARACT EXTRACTION.

They included all the cases which he had had, good and bad, from the beginning, and all the operations were performed at the Manhattan Eye and Ear Hospital. A brief clinical history of several of the most interesting cases was given. Thirty-one different patients were operated upon—males, 20; females, 11. Their ages varied from thirty to eighty-three years. Under forty years of age there were 2; between forty and fifty, 3; between fifty and sixty, 9; between sixty and seventy, 9; between seventy and eighty, 6; above eighty, 2. Twenty-eight

eyes were operated upon while the patient was under ether. Of these, 23 were successes, 2 partial successes, and 3 failures. Seven eyes were operated upon without the use of an anæsthetic; 5 of these did well, and 2 were failures. The method of operating known as "Von Graefe's modified" was used in all cases in which it was practicable; where a preliminary iridectomy was done the incision for the extraction of the lens was made in the same position as in the other cases. Preliminary iridectomy was performed in 6 cases; 4 by himself, and 2 by another surgeon. In only 1 case of the 35 was there loss of vitreous, and this was the only case in which the scoop was introduced into the eye for removing the lens, and in 3 cases there was dislocation of the lens into the anterior chamber during the preliminary iridectomy. In 1 case iridodialysis was produced during the operation, and in 1 case the iris fell before the knife on account of premature escape of the aqueous, and was cut through. In all these cases in which accidents occurred during the operation the eyes recovered with good sight. In 3 cases the cornea was thin and flaccid, and became wrinkled or collapsed after evacuation of the lens. In 8 cases there was hemorrhage from the iris immediately following the iridectomy. In 4 cases a considerable quantity of soft lens matter was left in the eye. In 1 case some inflammatory reaction was noted during recovery; this eye did well. In 4 cases there was iritis. Sloughing of the cornea occurred in 1 case, panophthalmitis in 2 cases, and in 1 there was irido-cyclitis with sympathetic inflammation of the fellow eye. A secondary iridectomy was performed in 2 cases, in both resulting in a clear pupil, but in one failing to restore sight on account of deeper disease. Keratonyxis for pupillary membranes was performed in 7 cases, and in all successfully.

The successes, taking the results of all the cases, complicated and uncomplicated, were 27; partial successes, 2; failures, 6. Dr. Webster believed, however, in justice to himself and cataract statistics, he ought to exclude the cases of extensive corneal opacity, a case of detachment of the retina, and one other case with vitreous and perhaps deeper complications. The figures would then stand: successes, 27; partial successes, 1; failures, 2. By success he meant the standard adopted by Dr. Knapp, namely V. $\frac{20}{200}$; partial success, ability to count fingers; failures, nothing more than perception of light.

The paper was discussed by Drs. Heyl and Strawbridge, of Philadelphia; Theobald, of Baltimore, and Carmalt, of New Haven.

Dr. W. W. Seely, of Cincinnati, then read a paper entitled

NOTES ON OCULAR THERAPEUTICS.

He directed attention, first, to the use of yellow oxide of mercury in external ocular troubles. Ten grains to the ounce of the vehicle is the best for all purposes. The less bichloride the preparation contains the less pain produced by its application. A practical point with regard to the use of yellow oxide and vaseline in conjunctival affections where there is profusion of tears, such as washes the salve out, was to substitute eserine or the bichloride in solution, to contract the blood-vessels. The strength of the bichloride solution that seems to answer every purpose is one grain to sixteen ounces of water. Such a solution is entirely painless, and has often, in his hands, set aside an acute catarrhal conjunctivitis of a violent type, after from one to three or four thorough drenchings of the conjunctiva. In corneal affections he uses a four-grain solution of eserine *once a day*, and believes that it acts altogether better than more frequent applications, either of the same or of a weaker solution. This remark applies to all classes of cases.

For the reduction of intra-ocular tension eserine has, for him, done away entirely with paracentesis.

Every one has met with cases of iritis in which atropia does not seem to act promptly and satisfactorily, possibly *because of the extreme vascularity of the iris.* In such cases, instead of making paracentesis and extracting blood, he instils once a day a few drops of a four-grain solution of eserine. The habit of instilling eserine once a day in iritic cases has become a routine practice with him, the patient at the same time using the mydriatic in the ordinary manner. In more than one case had he seen adhesions let go after the combined use of a myotic and mydriatic that had resisted the latter alone. Iritis is the only disease in which he employs a mydriatic as a fundamental remedy.

Eserine is the remedy *par excellence* in corneal affections. In cases in which mydriasis is necessary the latter can be produced perfectly, and still the satisfactory effects of the myotic be maintained. This is illustrated in suppurative inflammation after cataract operations, formerly so unsuccessfuly treated by heat and atropine.

Dr. McKay, of Wilmington, had used yellow oxide of mercury with very favorable results in conjunctival troubles.

Dr. Gruening, of New York, said the alternate use of mydriatics and myotics for breaking up adhesions was not entirely new. He had resorted to this method as long ago as 1868. He regarded the use of eserine in iritis as an extremely dangerous practice.

Dr. Knapp, of New York, thought the alternate use of eserine and atropine was advantageous in some forms of iritis, especially the serous variety. Again, where there is increase of pressure which produces intense pain, as in certain cases of glaucoma, the pain is considerably relieved by one drop of eserine. In serous iritis the pressure is sometimes intense, and he thought that eserine could be so regulated as to prevent the noxious effects of the drug.

Dr. Seely said he did not speak of the alternate use of eserine and atropine, but wished simply to speak of the use of eserine *once a day* for the purpose of contracting the "blood-vessels," of course maintaining mydriasis by atropine. He had never seen a case in which eserine had produced iritis.

The paper was further discussed by Dr. Kipp, of Newark, Dr. Knapp and Dr. McKay.

The Society then adjourned, to meet at 8 P.M.

EVENING SESSION.

The Society was called to order by the President.

The Minutes of the Morning Session were read and approved.

Dr. W. F. Mittendorf, of New York, then read a paper on

THE TREATMENT OF DETACHMENT OF THE RETINA.

During the last three years he had treated several very extensive detachments of the retina, occurring in patients that had only one useful eye, the other being entirely blind or absent. Although no new remedy or new method had been used, it was the combination of the different plans devised for the treatment of this affection, and the mode of administering the remedies that had led to the success.

After briefly referring to the causes of detachment of the retina, the author stated that the object of the treatment must be, first, to keep the eye as free as possible from all irritating influences, which is best done by closing both eyes, or by putting the patient into a dark room; second, to keep the eye as quiet as possible, and to avoid all accommodative efforts, and for this purpose the eye must be kept under the influence of a mydriatic; third, to place the absorbents in the most favorable condition—this is accomplished by means of a pressure bandage, and he had found elastic pressure procured by means of a rubber bandage to be of the greatest assistance; fourth, to hasten the absorption of the effused fluid, if this be the cause of the detachment—this can be accomplished by the use of jaborandi or pilocarpin. He had given a hypodermic injection of one-

fourth to one-sixth of a grain of pilocarpin early in the morning, and then kept up the diaphoresis by the use of an infusion of jaborandi leaves, from forty grains to one drachm to twelve ounces of water, administered in wine-glass doses during the afternoon and evening. This treatment should be kept up for three or four weeks. He had not seen a single case in which the remedy administered in this way had to be discontinued on account of unpleasant symptoms.

If the detachment complicates a specific choroiditis, or if it follows a serous iritis demanding specific treatment, this may be used at the same time with the other remedies mentioned. In these cases the disease yields, as a rule, sooner than in other cases, and it will not be necessary to push the pilocarpin to so great an extent.

Dr. Mittendorf then reported in detail three cases, all of which were successfully treated. They tended to show: 1, that in marked detachment of the retina the energetic use of jaborandi and pilocarpin will do good, especially if the patient can be kept under the influence of the drug during the entire day and for a period ranging from twenty to thirty days; 2, that the elastic pressure bandage must be used at the same time; 3, that the patients must be kept upon the back for most of the time; and 4, that the use of atropia, which is employed without causing any inconvenience to the patient, should likewise not be neglected.

The paper was discussed by Drs. Gruening, of New York; Little, of Philadelphia; Andrews, of Clifton, Staten Island; Webster, of New York; Theobald, of Baltimore, and Spaulding, of Portland, Me., who spoke of operative treatment in these cases. He referred to a suggestion made by Mooren that an attempt be made to remove the effusion by means of the hypodermic syringe. Having a case on hand, he tried the operation. Although he succeeded in removing a considerable quantity of the subretinal effusion there was not much improvement except temporarily. He suggested that the method might be cultivated by placing a piece of rubber tubing between the needle and the tip of the nozzle, thus making an instrument somewhat similar to that used in the treatment of soft cataract. At least he thought that some form of aspiration might be made applicable in these cases.

Dr. William S. Little, of Philadelphia, then reported

TWO CASES OF CONGENITAL ECTOPIA LENTIS, ONE SYMMETRICAL, THE OTHER NON-SYMMETRICAL.

The first case occurred in a man twenty-three years of age. The non-symmetrical position of the lenses in this case was of interest, and the question arose as to what influence glasses which the patient had worn might have had in producing divergence in the left eye, which is now going on, the right eye doing the work. The immunity for three years and freedom from trouble favored strongly the opinion that the glasses had not entered as a factor in the etiology of the divergence.

A sketch of a case by Dr. J. M. Taylor, which occurred in the practice of Dr. C. S. Turnbull, of Philadelphia, was also presented. The patient wore glasses with comfort for more than a year, when he was accidentally killed.

The paper was discussed by Dr. Mittendorf, of New York, who related the history of a case.

Dr. George T. Stevens, of New York, then read a paper on

THE EMPLOYMENT OF NITROUS OXIDE AS AN ANÆSTHETIC IN OPHTHALMIC OPERATIONS.

He had employed it in operations about the nasal duct, iridectomy, cystotomy, and similar short operations, and believed that it possessed several advantages, such as being less dangerous, unattended with nausea and other symptoms which are incident to the use of ether, and that it demanded for its administration far less trouble than ether or chloroform. He thought it doubtful if it could be relied upon for cataract operations.

The President had employed it more or less during the last ten years, and stated that the oxide had the advantages claimed for it to a certain extent. He had, however, noticed two features: first, there is apt to be a good deal of rigidity on the part of the patient in some cases; second, it is apt to be attended with a great deal of venous congestion which gives rise to considerable hemorrhage in wounds about the eye.

Dr. R. H. Derby, of New York, had employed the nitrous oxide preliminary to prolonged anæsthesia with ether, and with very gratifying results.

Dr. Buller, of Montreal, said that for some time nitrous oxide was used in the Moorfields Hospital in London, but with unsatisfactory results. He had resorted to the primary anæsthesia produced by ether with exceedingly gratifying results.

Dr. Albert G. Heyl, of Philadelphia, then presented

A CONTRIBUTION TO THE OPERATIVE TREATMENT OF GLAUCOMA.

After giving the ordinary method of treatment employed, and detailing the history of a case which had been under his observation, and in which he had resorted to operative treatment, he recommended the following plan as a modification of that which he had employed. It was to ligate the frontal artery and then open the supra-orbital artery and allow a few ounces of blood to escape, and then close the vessel with a ligature. He discussed at considerable length the physiological basis of the operation, and said that he wished simply to place upon record a piece of clinical experience which he thought would shed some light upon the condition of acute glaucoma. The patient upon whom he operated was suffering from chronic glaucoma when he saw him, but the case had been one of acute glaucoma in its inception.

Dr. Webster, of New York, recalled a case in which a California surgeon advocated the ligature of the carotid early for glaucoma, performed the operation once and cured his patient.

The President stated that the natural history of acute glaucoma must be considered before deciding with reference to the influence produced by any modification of the circulation by operation.

Dr. Seely, of Cincinnati, said it should be borne in mind that the influence of the Californian operation was directly the reverse of that suggested by Dr. Heyl.

Dr. Gustavus Hay, of Boston, then made a communication on the

ASTIGMATIC PENCIL.

It was discussed by Dr. Knapp, of New York.

Dr. Charles J. Kipp, of Newark, N. J., then reported cases of

SARCOMA OF THE CHOROID WITH INTERESTING CLINICAL FEATURES.

The first case was that of a woman seventy years of age, first seen six weeks before the eye was removed. Sight had been lost only a few months. There was no pain, nor was there any sign of inflammation of outer parts of the eye. In the outer half of the eye behind the lens was seen a large white mass of round form, on the surface of which were numerous hemorrhages. The retina was detached in the inner half. The diagnosis of intra-ocular tumor was made and enucleation advised. Four weeks later symptoms of secondary glaucoma developed, and after the patient had endured the pain for two weeks she consented to have the eye removed. The operation was not attended by accident, and the wound healed rapidly. On examination of the eye a large dark tumor was found which nearly filled the eye, and which had started from the outer half of the choroid. It was

covered in part by the retina, and extended anteriorly to and involved the ciliary body. It consisted of spindle-shaped cells, and contained much pigment.

The second case was that of a man thirty-four years of age, who was first seen seventeen months before enucleation was performed. At that time the anterior parts of the right eye were apparently quite healthy. On the nasal side of the eye a semi-globular protuberance was seen to project nearly to the visual axis; upward and downward it extended apparently nearly to the vertical meridian. Anteriorly it did not reach quite to the ciliary processes. The tumor was of a greenish-red color, and was covered by transparent retina; its surface was smooth, and its vessels were distinctly visible. The retina was slightly detached at the base of the tumor, but nowhere else. The optic disk was very pale and its margin slightly blurred. The other parts of the choroid and retina presented nothing abnormal except an atrophic patch in chord below disk. Tension was normal; visual field defective in outer half, and much contracted upward, downward, and inward. The other eye showed numerous atrophic spots in choroid and pigment deposits in retina. From the patient it was learned that twenty years ago he had had a severe attack of some eye disease which seriously impaired the left and somewhat the right eye, the one now containing the tumor. Since then his sight remained the same until two months ago, when he noticed that his right eye failed. The disease from which he suffered twenty years ago was doubtless a choro-retinitis, the results of which were plainly visible in both eyes. Seventeen months later the patient was seen again. There was now great pain, and the eye presented the usual symptoms of secondary glaucoma. The eye was enucleated and the wound healed rapidly. On examination the tumor was found to have started from the choroid in the region of the macula lutea. It was very large. The retina was detached completely. The microscopical examination of the tumor showed it to be a spindle-celled melano-sarcoma.

The third case was that of a woman forty-one years of age, who was first seen fifteen months before the eye was enucleated. At the first examination nothing abnormal except a prominence and opacity of the retina at macular region was found. The retina for a space of about two diameters of the optic disk was grayish, and the retina veins here were dark in color. The summit of the prominence was best seen with a +4 dioptric glass. The retina was not detached, neither over the prominence nor anywhere else. The eye was as it had been practically blind for some months. The case was seen from time to time for two months, during which period no marked change in the eye was observed. Thirteen months later she was seen again. She had the secondary glaucoma, which had come on about two weeks before. The eye was enucleated and the wound healed rapidly. On examination a large tumor of irregular form, and with very broad base was found, which originated in the region of the macula lutea and from there spread over the optic.

The fourth case was that of a woman forty-two years of age. Sarcoma of the ciliary body and iris. Secondary glaucoma was present when the patient was first seen. The tumor did not extend to the choroid, and the microscopic examination showed that it had probably originated in the connective tissue of the ciliary muscle. It was composed of spindle-cells and contained much pigment. Five years after the operation there was no relapse.

Dr. Kipp also read a paper describing a case of very extensive ossification of the choroid occurring in a young man who, when first seen ten years ago, had a chalky cataract, to which the pupil was everywhere adherent. As there were at that time no symptoms of irritation of the eye, and the case was hopeless so far as sight was concerned, no treatment was advised. The boy had been born with the cataract, according to the mother's statement. Ten years afterward the eye became painful and presented when then seen the appearance of iridocyclitis. The eye was removed, and on examination the osseous plate lined the inner side of the choroid and as far as the ciliary processes.

The communication was discussed by Dr. Howe, of Buffalo, who presented a specimen, the President, and Drs. Mittendorf and Webster, of New York.

Dr. S. Theobald, of Baltimore, then read a paper on

TRITURATION OF THE CORTEX.

He reported two cases in which this operation was practised in connection with preliminary iridectomy to hasten the development of slowly ripening cataracts. The operation consists in a kneading or bruising of the anterior cortical layers of the lens by pressure on the cornea after iridectomy and while the anterior chamber is still empty, and is in accordance with the suggestion put forth by Professor Förster, of Breslau. The trituration was done with the angle of the strabismus hooks, and in the first was imperfectly performed. In the second case the operation was performed with the smooth end of the Bowman tortoise-shell cataract spoon, which seemed better adapted to the purpose. In the first the operation was followed by but slight change in the condition of the lens. In the second case, however, a very rapid development of the cataract ensued. In each case there occurred a sufficient amount of iritis to cause slight but persistent adhesions between the iris and lens at the pupillary angle of the coloboma, and in the second case it was found by oblique examination a day or two after the operation that near the cut edges of the iris the pigment layer had been detached from the muscular coat in a manner which was quite peculiar. That the iris should be more or less bruised as well as the lens, however carefully trituration be performed, appears unavoidable, and the risk of exciting inflammation in this manner seems the chief objection to the procedure. It would appear, however, that Professor Förster has not had serious trouble from this source, as he makes no special reference to it in his paper.

Dr. Gruening, of New York, had performed the operation twice during the last year. In the first he performed large iridectomy upward and with the angle of the strabismus hook triturated the lens in the *area of the pupil only*. No iritis followed, and the lens became completely opaque within one week. He extracted it three weeks later with very good results. In the second case he performed iridectomy upward and again treated the lens only in the area of the pupil, and in four days the lens was completely opaque. He thought there were certainly cases in which the operation was indicated, and was attended with great gain.

Dr. Kipp said that he performed the operation some time ago, the lens became opaque, and four or five days afterward it cleared up again.

Dr. Mittendorf, of New York, thought the operation was indicated, especially in certain cases in which two cataracts were forming, and his experience in the operation had been equally favorable with that reported by Dr. Gruening.

Dr. Knapp, of New York, had performed the operation once; but it did not seem to hasten the ripening of the cataract.

Dr. Wadsworth, of Boston, had performed the operation once in a patient eight years ago. There seemed to be no effect at all, so far as ripening of the cataract was concerned. He thought that probably in some cases maturity of the cataract might be hastened very much by the method, while in other cases probably the result would be very slight.

The President had operated eight times, and in seven cases had subsequently performed extraction. In one case marked iritis developed, but did not interfere with the subsequent recovery, and extraction was entirely satisfactory. He hoped to make a communication upon the

subject which would embrace the history of all his cases, with remarks.

Dr. Gruening remarked that by the area of the pupil he meant the new pupil, including the coloboma.

The paper was further discussed by Drs. Webster, of New York; Fox, of Philadelphia; Dyer, of Newport, and Theobald, of Baltimore.

The Society then adjourned to meet at 9 A.M. July 19th.

Second Day—Thursday, July 19th.

The Society was called to order at 9 A.M. by the President.

The Treasurer moved that the annual assessment be five dollars. Adopted.

VASELINE CERATE A CONVENIENT BASIS FOR OINTMENTS INTENDED FOR APPLICATIONS TO THE EYELIDS.

Dr. Theobald, of Baltimore, read a brief paper on the above subject, in which he stated that he had been using with much satisfaction for several months, both in private and in hospital practice, as a basis for ointments intended for application to the eyelids, a cerate made of yellow wax and vaseline, which is prepared without difficulty by melting the wax and vaseline together by gentle heat, and stirring the mixture until it hardens, combining one part of yellow wax with four of vaseline, which proportion gives the ointment sufficient firmness, except, perhaps, in very hot weather, when the proportion of wax may be increased to one to three. Dr. Theobald also exhibited a specimen of ointment of the yellow oxide of mercury, containing two grains to one drachm of vaseline cerate, which, though prepared nearly four months since, and kept with no special care, still retained its bright yellow color and had undergone no appreciable change. He had been told that cerates prepared by vaseline were in use, but was not aware that attention had been called to the convenience of employing them in the manner suggested.

Dr. H. Knapp, of New York, then read a paper in which he reported a case of

BLINDNESS FROM RETINAL THROMBUS IN CONSEQUENCE OF FACIAL ERYSIPELAS.

There is on record a certain number of cases of blindness in consequence of facial erysipelas. Their symptoms vary considerably. There is lack of ophthalmoscopic examinations during the first stage of the affection. Not long ago Dr. Knapp had the rare opportunity of observing such a case almost from the beginning to the end. Mr. E. F——, forty years of age, had lived in the tropics, had had syphilis with secondary and tertiary symptoms which were aggravated when his business called him north. On March 20, 1883, while in New York, he had an attack of erysipelas which began upon the nose, proceeded to the pharynx, cheeks, and orbits. The patient was under the care of Drs. Gulecke and Schottke, who kindly allowed Dr. Knapp to publish the case. The erysipelas progressed, and on March 28th he was totally blind in both eyes. Reserving a detailed discussion of this case for publication in the "Archives of Ophthalmology," Dr. Knapp restricted himself to the following remarks:

First.—The blindness was produced by compression of the central retinal arteries and subsequent thrombosis of the retinal veins, both having been directly observed with the ophthalmoscope one day after the occurrence of the rapid, almost sudden loss of sight.

Second.—The ophthalmoscopic appearances observed from beginning to end showed no neuro-retinitis, but the successive stages of a thrombosis.

Third.—The degrees of the swelling of the orbital tissue or the establishment of collateral circulation from the choroid permitted the return of a limited flow of blood into the retinal arteries, which, however, was impeded by the blocked veins, leading to renewed extravasation to the thrombosis and shrinkage of the arteries, and finally to atrophy of the optic nerve.

Fourth.—Perivasculitis played no, or only an unimportant part in the pathology of this case.

Fifth.—The white segments in the veins and arteries were white thrombi and not hypertrophy of the walls of the blood-vessels.

Sixth.—The thrombus was present in all probability also in the orbital veins, but did not, as in other cases, extend to the cerebral sinuses.

The paper was discussed by Dr. Kipp, of Newark, who stated that the cases in which he had seen the condition described by Dr. Knapp, the retina and its immediate vicinity was in a state of inflammation or, at least, opaque, but not between the veins; by Dr. Knapp, who thought that the segments of the veins becoming white could be used as a diagnostic symptom of embolism; by The President, who had seen a case in which the process was confined more particularly to the optic nerve, with swelling and neuro retinitis, and subsequent atrophy and nearly absolute blindness; and by Dr. Seely, of Cincinnati, who had seen a case in which iodoform used as a dressing had produced facial erysipelas in three distinct instances.

Dr. Knapp felt certain that the iodoform had no unfavorable influence whatever in his cases.

Dr. W. H. Carmalt, of New Haven, Conn., read a paper on

CHANGES IN REFRACTION RESULTING FROM A BLOW.

R. A. S——, twenty years of age, student in the sophomore class in Yale College, myopic since twelve years of age, consulted him on October 23, 1882, stating that while practising in the gymnasium the day before, he had fallen violently forward, striking his right eye upon a bolt projecting from the floor. The blow was sufficiently severe to give rise to disturbance that obliged him to keep quiet for the remainder of the day and evening, neither going about nor studying. But at the time of his visit he felt quite well again, except with reference to his eye, wearing his glasses habitually for all purposes of vision, near or far. He now felt an uncomfortable sensation in looking through his right glass, and could see much better at a distance without it, better, indeed, than he remembered ever to have seen before without glasses, but for all that he had a very confused sensation when looking with both eyes either with or without glasses. Four months afterward he was again consulted, when he found on ophthalmoscopic examination that there was no conus at the nerve, nor other evidence of retino-choroidal trouble. By oblique illumination no opacity of the lens was detected. On the following day he saw, at Dr. Carmalt's suggestion, Dr. Loring, of New York, in consultation. To summarize the facts of this, to his knowledge, unique case, it seemed established that in a case of myopia of very considerable and nearly equal degrees in the two eyes, one was reduced by the impact of a blow to a condition of astigmatic myopia which resolved itself finally into a cross astigmatism without any loss of acuity of vision or range of accommodation. After endeavoring to account for the mechanism of this change, five possibilities presented themselves: 1, a change in the shape of the cornea; 2, a diminution or shortening of the axis of the globe; 3, a displacement or dislocation of the lens backward; 4, a change in the relative position or arrangement of the lenticular fibres; 5, a pre-existing spasm of accommodation, the tonicity of which had been released by the paralytic effect of the blow.

Dr. Carmalt excluded, as did also Dr. Loring, change in the length of the eyeball, also dislocation of the lens, also the previous existence of spasm of accommodation. The remaining alternative cannot be urged from any knowledge we have of such a condition having been positively determined. It is urged rather as a refuge, all the other explanations having been disproved or not being

satisfactory. Is it not possible that a sudden and violent impulse could have shaken and so displaced the denticulate articulations of the lens fibres that they became fastened in a position to correspond to (or cause) the error of refraction indicated above?

The paper was discussed by Drs. Knapp, Noyes, Seely, Webster, Buller, McKay, and F. B. Loring.

Dr. E. W. Bartlett, of Milwaukee, Wis., then read a paper entitled

A FURTHER MODIFICATION IN CATARACT EXTRACTION.

The modification proposed is to make the preliminary iridectomies in certain difficult cases, one upward and one downward. Dr. Bartlett then reported two cases which illustrated the modification. The modification was suggested in difficult cases only, as when the eye is very prominent, when the iris does not react to atropine or attachments have formed between the iris and capsule, when the one eye has been lost and the least amount of risk should be taken with the other eye, and when the patient is very infirm and danger from shock is very great, and when the cataract is maturing very slowly. In such cases this modification gives the patient a better chance of securing a certain amount of sight than the method of making the whole operation at one time.

Dr. Gruening, of New York, then read a paper entitled

BLEPHAROPLASTY ACCORDING TO THE ENGLISH METHOD.

A young man sustained an injury of the face by the explosion of a petroleum lamp. As a result of the mishap the integument of almost the whole forehead, the right temple, the right cheek and corresponding half of the nose was changed into dense cicatricial tissue. The upper lid was wholly everted and its free border attached to the supra-orbital margin. To correct the deformity the lid was detached from the orbit, the neighboring tissues undermined, the deep scar exsected, the free border of both lids brought in apposition and united by free sutures. The surface of the wound measured 40 mm. in the vertical, and 55 mm. in the horizontal direction. In order to cover the defect a flap was transplanted from the inner surface of the left arm and placed upon the wound. The flap was prepared according to Wolfe's suggestion, *i.e.*, deprived of its subcutaneous cellular and adipose tissue. After careful coaptation of the flap to the edges and the surface of the wound goldbeater's skin and a bandage were used to maintain the flap in its position. No discoloration, no displacement of the flap ensued; it united firmly with the wound, and the ectropion was corrected. To-day, *i.e.*, nine months after the operation, the flap measures 15 mm. in the vertical, and 30 mm. in the horizontal direction. The shrinkage took place during the first four weeks after the operation. No further shrinkage during the last eight months. The result is very satisfactory, and would not have been obtained by any other method.

The paper was discussed by Drs. Wadsworth, of Boston; Kipp, of Newark, and Andrews, of Staten Island.

Dr. McKay, of Wilmington, then reported a case of

LOSS OF AN EYE FROM SEWER-GAS AFTER EXTRACTION OF A CATARACT.

John H——, a German brewer, sixty-one years of age, was operated upon April 16, 1882, for senile cataract, without an anæsthetic, by Graefe's method of linear extraction. The upward operation was performed satisfactorily, and without any accident whatever. He counted fingers immediately after the operation. The eye was covered with absorbent cotton and a light flannel pressure bandage without the further introduction of a mydriatic. Three and a half days after the operation the bandage became somewhat loosened. This eye was examined, and atropia was introduced. The incision had closed, the cornea was clear, the pupillary field dark, and vision, tried for a moment, was very encouraging. The patient subsequently developed symptoms of some general disease, evidence of contamination of the atmosphere by sewer-gas was detected, and finally the eye was lost, as Dr. McKay believed, in consequence of the poisoning of the general system produced by this noxious agent.

Dr. McKay also reported a case of

SYMPATHETIC NEURO-RETINITIS OCCURRING DURING PREGNANCY.

The patient was twenty-six years of age; she had been married ten months. In infancy she had scarlet fever, since which time the right eye had been weak. Five years ago the eye was treated for a painful inflammation by an oculist in Philadelphia, but during the last two years it had not annoyed her. When Dr. McKay saw the patient the eye was in a quiescent state of chronic irido-choroiditis with partially occluded pupil and dense opacity of the vitreous. She complained of her left eye, and reported that after a week's crocheting a sudden pain was felt in it while looking at a white wall. She was debilitated by malarial and pulmonary troubles and was three months advanced in pregnancy. Ophthalmoscopic examination revealed hypermetropia and a faint opacity of the deep portion of the vitreous, with decided congestion of the optic disk and retina, and within two weeks the appearances of sympathetic neuro-retinitis were fully manifested, and vision was reduced to counting fingers six to eight inches in a dimly lighted room. After three months' treatment in a darkened room, with a dark bandage over her eyes, and the occasional use of a solution of atropia to prevent iritic adhesions, inunctions of mercurial ointment to the temples, several leechings to the left temple, and a general sustaining and tonic treatment, she improved in general health, and the vitreous opacity as well as the exudation of the optic nerve and retina disappeared, and she recovered good vision. Her pregnancy, Dr. McKay thought, greatly modified the course of the sympathetic neuritis favorably. The ophthalmoscopic appearances of retinitis albuminuria were looked for repeatedly, but never were found, and the fact of her vision not being again impaired while she had general anasarca, which developed later in the progress of the case, enabled him to regard it as a case of neuro-retinitis.

Dr. L. Howe, of Buffalo, then read a brief paper and presented a specimen which illustrated

THE DIFFICULTIES IN MAKING A DIFFERENTIAL DIAGNOSIS IN GLAUCOMA.

The patient was four months old. When first seen, two months of age, a yellowish reflex was noticed in the interior of the eye which had been previously somewhat reddened, and vision, so far as could be determined, was much impaired. Increase of tension was scarcely perceptible, but after some hesitation it was regarded as + 1. After enucleation it was found that the entire vitreous had contracted into a small cone as a result of previous inflammation, and that the apex touched the retina, having its interior filled with a semi-purulent yellowish substance.

Dr. E. E. Holt, of Portland, Me., then read a paper entitled

COMMOTIO RETINÆ, OR SOME OF THE EFFECTS OF DIRECT AND INDIRECT BLOWS TO THE EYE.

Dr. Holt reported four cases. In two of these the patient was struck more or less directly by a stick of wood, in one by a round rod or cane, and in the other by a flat piece of coal, striking the forehead, nose, and cheek, not hitting the eye itself. In three cases recovery was uninterrupted. In one there was a relapse. Vision was reduced to a perception of light for four days, after which it began to return, and in the course of two weeks became nearly normal. Relapse then occurred and vision sank, but not so low as it was after the receipt of the injury, and recovery with a perfect eye took place

much more slowly than at first. Dr. Holt gave a detailed history of this case and also of one of the others.

THE PRESIDENT remarked that Dr. Holt had reported four cases manifestly dissimilar in character. From a thorough study of the affection referred to he had become convinced that commotio retinæ is a phenomenon which had been entirely explained upon the supposition of a fissure running through the optic foramen of the orbit, and is almost entirely mythical when taken by itself.

DR. SEELY, of Cincinnati, thought the subject could not be dismissed so summarily as Dr. Noyes had supposed. He had reported one case which could not be explained away so readily, because a single application of electricity restored a vast amount of vision, and there was no explanation of the extreme lowering of the vision from which the patient suffered.

DR. KIPP referred to a case in which there was a fracture and subsequent blindness, and suit was brought for damages. The question which arose was whether the case was one of congenital blindness with divergence, or was it due to injury. On further examination of the patient and the surroundings he discovered that the mother had the same condition in the corresponding eye, and taking this into consideration he concluded that the blindness was not due to the injury.

The paper was further discussed by Drs. Gruening, Knapp, Wadsworth, and McKay.

A paper entitled "Two Cases of Ophthalmoplegia Externa, Associated with Disease of the Optic Nerves from Brain Tumor, with an Account of the Post-mortem Examination," by DR. CHARLES STEADMAN BULL, of New York, was read by title and referred to the Committee on Publication.

INJURY TO THE EYES BY HANGING.

DR. F. B. LORING, of Washington, said that since the series of experiments reported by Dr. Dyer, he had seen no communications concerning the effect produced upon the eyes by hanging, except the case reported by Dr. Green, of St. Louis, which was not corroborative. He had had opportunity to observe one case, which he wished to place upon record. In that instance both eyes were affected, although one was not affected so markedly as the other.

DR. GREEN remarked that his case was not corroborative of Dr. Dyer's conclusions in a certain sense, but he did not consider it valuable either as corroborative or otherwise, because the time limited for examination after the execution was too short, not being more than one hour.

DR. HOWE, of Buffalo, referred to one case in which he examined the eyes thirty-five minutes after the execution, and was unable to see any change.

DR. R. H. DERBY, of New York, referred to three cases which he had already reported in which there were marked changes in the eye produced by hanging.

COLOBOMA OF THE CHOROID.

DR. MCKAY, of Wilmington, wished to place on record three cases. In one there was coloboma of the iris. Two cases occurred in children, aged respectively seven and ten months. The other occurred in a woman twenty-eight years of age. In the child seven months of age the coloboma of the iris occurred.

DR. THEOBALD, of Baltimore, presented an additional modification of his bandage, which he regarded as a substantial improvement. It consisted in cutting the eye-piece biasing in order to prevent the tendency to wrinkling.

DR. MITTENDORF called attention to a new method of applying remedies to the eye, namely, in the form of impalpable powders or triturations. He presented several specimens of remedies prepared in this way.

THE PRESIDENT remarked that he had employed homatropin prepared in this way, and had been well pleased with the preparation.

DR. JONES asked if this method was preferable to the disks prepared by Savory & Moore.

DR. WADSWORTH, of Boston, spoke of the loss of power in a solution of eserine. Recently he had found a solution which was three years old, and it still worked perfectly well.

DR. SEELY, of Cincinnati, said that for ordinary purposes he preferred an old solution of eserine to a fresh one.

The following officers were elected for the ensuing year: *President*—Dr. H. D. Noyes, of New York; *Vice-President*—Dr. William F. Morris, of Philadelphia; *Secretary and Treasurer*—Dr. R. H. Derby, of New York; *Publication Committee*—Drs. E. G. Loring and D. B. St. John Roosa, of New York.

The place of holding the next annual meeting is Kaaterskill, N. Y., and the time the third Wednesday in July.

The Society then adjourned.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 14, 1883, to July 21, 1883.

MAGRUDER, D. L., Lieutenant-Colonel and Surgeon. Medical Director Headquarters Department of the Missouri. Granted leave of absence for one month, with permission to apply for an extension of one month. S. O. 145, Department of the Missouri, July 12, 1883.

ELBREY, FREDERICK W., Captain and Assistant Surgeon. The leave of absence granted on Surgeon's certificate of disability, by S. O. 26, A. G. O., January 31, 1883, further extended six months on Surgeon's certificate of disability. S. O. 162, A. G. O., July 16, 1883.

POWELL, JUNIUS L., Captain and Assistant Surgeon. Assigned to duty at Fort Columbus, N. Y. H. S. O. 130, Department of the East, July 18, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Adams, Newport, R. I. S. O. 130, Department of the East, July 18, 1883.

PERLEY, HARRY O., Captain and Assistant Surgeon. Assigned to duty at Fort Pembina, D. T. S. O. 118, par. 1, Department of Dakota, July 5, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 21, 1883.

SCOTT, HORACE BROWN, appointed as Assistant Surgeon.

RUSH, CHARLES W., Assistant Surgeon, promoted to Past Assistant Surgeon.

DIEHL, OLIVER, Assistant Surgeon, promoted to Past Assistant Surgeon.

BRYAN, J. H., Assistant Surgeon, promoted to Past Assistant Surgeon.

GATEWOOD, J. D., Assistant Surgeon, promoted to Past Assistant Surgeon.

WHITE, C. H., Surgeon, detached from the Lackawanna, and placed on waiting orders.

HEFFINGER, A. C., Past Assistant Surgeon, detached from the Lackawanna, and granted leave of absence for three months.

WOOLVERTON, T., Surgeon, detached from the Naval Hospital, Philadelphia, on July 31st, and granted leave of absence for one year, with permission to leave the United States.

MR. ALFRED ROBERTS, Surgeon to the Prince Alfred Hospital, New South Wales, has received the honor of knighthood.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 24, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 17, 1883.....	0	18	38	4	68	23	0	0
July 24, 1883.....	0	16	39	7	87	12	0	0
Deaths.								
July 17, 1883.....	1	10	7	4	21	16	0	0
July 24, 1883.....	0	4	11	5	19	10	0	0

HARDLY EVER—BROKEN.—Dr. F. H. Darby, of Morrow, O., writes: "I secure my thermometer case in the upper vest pocket, by wrapping it three or four times around near the shoulder with a common half-inch No. oo rubber band. If the pocket is wide divide it in two compartments by a pin or a few stitches, the other side can then be very properly used for a pen-holder, comb, or pencil. For cheapness, the cost being a pin and a rubber band, simplicity, and facility of changing from one vest to another, we submit the above, if you will pardon egotism, as being *the very best of all.*

HOW PATENT MEDICINES PAY.—The *Milwaukee Sentinel* in a very sensible article on "Patent Medicines," truthfully says: "It is advertising that is the secret of success in the case of patent medicines, if there is any secret about it. There is not a patent medicine which is superior to the preparations provided for by the standard medical publications. It is much simpler, however, for the person who wants a medicine, to buy a bottle of patent medicine, good for every human ill, than go to a physician. By advertising a patent medicine extensively and persistently the people are brought to recognize certain common and simple sensations as evidences of a disease which this particular remedy will cure. About all that is required to succeed in the patent medicine line is money and nerve to use it in advertising. It makes no sort of difference what medicine it is—the combination of drugs is the item of least importance. It is well, perhaps, to put the drugs, if any are used, in spirits, so that a man can take his whiskey with a clear conscience—indeed, with a sense of his own worthiness in taking care of his health. Occasional changes in the name of the medicine and of the maker are desirable, for after a few years the public demands something new. The same medicine may be used, but a change of name and of the character of the illustrations is demanded. After a long run of a patent medicine as a cure for lung troubles, a new run may be established by calling it a remedy for stomach troubles. When a fortune has been made out of lung pads, they can be cut down in size and another fortune made out of them as kidney pads."

VIOLENT HEMORRHAGE FROM THE LEFT EXTERNAL AUDITORY MEATUS FOLLOWING A COLD ABSCESS—SUBSEQUENT RUPTURE OF THE LEFT INTERNAL CAROTID, CAUSING DEATH IN A FEW SECONDS.—Dr. R. B. Davy, of Cincinnati, reports the case of a little girl three years of age suffering from restlessness, coated tongue, sore throat, and slight fulness of left side of neck. In the act of examining the throat (the child resisting) an abscess of the left ear broke and discharged about a teaspoonful of reddish pus. After a few hours violent hemorrhage from the ear set in, and in the course of two days fully a quart of blood had been lost. Most of this quantity was discharged at two bleedings, the pillows being stained only with small spots in the intervals. The hemorrhage ceased spontaneously and for nearly a week the ear discharged pus, gradually losing its reddish cast. The ear was examined with reflected artificial light and the membrana tympani found to be intact. The child was improving, though very pale. On the fifth day after the last hemorrhage another, quite as violent as the first, occurred. The ear was now plugged with a bit of sponge, which checked the bleeding. Simultaneous with the plugging there appeared a swelling about the size of the longitudinal half of a hen's egg extending from the left mastoid process downward and forward. This swelling increased in size until late in the afternoon, when the plug was forced out of the ear, the blood spurting at least a foot from the child's head and the swelling beneath the ear diminishing in size. The ear was now more firmly plugged and ice-bags applied to the swelling which had returned immediately. The next day the swelling was perceptibly smaller and had a leathery feel on firm pressure; but the third day afterward it again increased in size, and showed signs of suppuration, though there was no pointing externally. On the following afternoon the left internal carotid ruptured in the mouth, and the child bled to death in a few seconds. The post-mortem revealed at the site of the swelling a deep-seated abscess whose contents had come in contact with and injured the coats of the vessel in question, causing them to give way. The loss of blood during the fatal hemorrhage amounted to but little over half a pint. Careful inquiry was made but no history of hemorrhagic diathesis was obtained, and the doctor concluded that the first hemorrhage had been caused by ulceration of the coats of the posterior auricular artery. The case will be reported in full in the *Cincinnati Lancet and Clinic.*

THE RODS AND CONES in the ninth layer of the retina have generally been considered to have an important function in vision. Dr. Borysikiewicz has recently asserted that they are entirely absent in the eyes of tigers and leopards which he has examined. Yet these animals have acute vision.

CASE OF CUTANEOUS CALCULUS.—Dr. G. W. H. Kemper, of Muncie, Ind., sends us the following report: "On May 9, 1878, I removed by incision one of these rather rare morbid specimens. The patient, a lady, aged fifty-five years, stated that about twenty years previously a small tumor developed in the right eyebrow, and gradually grew to the size of a hazel-nut. She had experienced no pain from it until the last year before its removal, when its presence became rather annoying, and at times caused neuralgic pains by pressure upon the supra-orbital nerve. It probably began as a sebaceous cyst and eventually was transformed into a calcareous mass. I was uncertain of the character of the tumor until my knife came in contact with the stone. It is of an oval shape, rough surface, and weighs at this time seven grains. No further trouble was experienced after its removal."

TONSILS BY THE BUSHEL.—Dr. W. N. Williams, of Indianapolis, Ind., writes: "In the discussion on Dr. William C. Jarvis's paper, 'Tonsillotomy without Hemorrhage,' read before the American Medical Association at its late session in Cleveland, O., you report Dr. J. P. Thompson, of Indianapolis, Ind., as saying, 'He did not intend to overestimate in the least, but believes that, without exaggeration, he has excised *two bushels* of tonsils,' etc. (see page 667, MEDICAL RECORD, June 16, 1883). The italics are yours, Mr. Editor. Suppose we figure on that statement a little. A bushel contains 2,150$\frac{4}{5}$ cubic inches (see 'Ray's Practical Arithmetic,' page 83. One thousandth Edition). Discarding the fractions, we have 4,300 cubic inches in the two bushels. Assume that each tonsil would occupy a space of one-half cubic inch, it would require 8,600 tonsils to fill out

his measure of two bushels. Now, if the doctor excised one tonsil each day in the year, it would have required twenty-three years, six months, and twenty-five days to have completed the job. If his instruments were in good order, and he really felt well, and excised a pair of tonsils each day, he could have done it in the little matter of eleven years, nine months, twelve days and a half. If Dr. Thompson has really excised two bushels of tonsils in his practice, how many bushels have our other specialists excised? Speak out, gentlemen, or acknowledge by your silence that the championship of America in tonsil-cutting belongs to Indiana. It may be if some other gentlemen were to file their broad axes, grind their hand-saws, spit on their hands and sail in, that they could capture the champion's belt at the next meeting of the American Medical Association."

CHLOROFORM NARCOSIS DURING SLEEP.—Dr. Hunter H. Powell, of Cleveland, O., sends us the following case bearing upon the subject of chloroform narcosis during sleep: "On June 15, 1883, I was called to see a boy four years of age, who had fallen upon a piece of glass and cut the palm of his right hand badly, I found him asleep and determined to try the experiment of chloroforming in that state, as I had been interested in the various articles bearing upon the subject which have lately appeared in THE RECORD. I took my time about it and found no difficulty in getting him fully under its influence, examined the wound for bits of glass, put in necessary stitches, and put on the required dressing before he became conscious. I believe this will become a popular method for administering chloroform to children and am surprised it has not been resorted to more frequently. By it we save the litttle ones from the fright with accompanying excitement experienced by many of them at the first approach of chloroform, a gain certainly to be desired for the sake of child, mother, and doctor."

THE METHODS OF MONTHLY NURSES.—Dr. Alexander, in a series of articles in the *Medical Times and Gazette* on the management of parturition and the puerperal state, remarks on the habit of nurses of having each some special point which she considers of importance in the management of labor cases, and which, in her ignorance of the true principle involved, she is apt to overdo, or to do wrongly. For instance, one dreading hemorrhage will compress every uterus; another will drench every woman with cold water, etc. He says the best plan of finding out these faults is to "blow up" the nurse generally when troubles arise that we cannot get at the origin of, and wherever she in her self-defence shows herself to be most zealous, it is *there* we must look for the errors that are producing the mischief.

AN ANALYSIS OF INDIAN TEA.—Water, 5.849 per cent.; extract, 37.800 per cent.; total ash, 5.790 per cent.; ash soluble in water, 3.667 per cent.; ash insoluble in water, 2.123 per cent.; ash insoluble in acid, 0.149 per cent.; insoluble leaf, 50.100 per cent.; tannic acid, 13.040 per cent.; theine, 3.240 per cent.

THE INSANE ASYLUMS OF ITALY.—Italy has sixty-two insane asylums, which contain 17,471 insane inmates; of these, 9,000 are men, 8,471 are women. Since 1877, the number of admissions has been constantly increasing.

ABSENCE OF VAGINA, UTERUS, OVARIES—ENORMOUS DISTENTION OF URETHRA, WITHOUT INCONTINENCE.—Dr. James F. Ferguson, Visiting Surgeon to the Charity Hospital, N. Y., relates the history of a prostitute admitted October 25, 1881. Father was consumptive; mother died of pulmonary hemorrhage. The patient was the tenth child. She denied all previous venereal trouble. Although eighteen, had never menstruated, nor did she give any history of vicarious phenomena. She noticed a pimple on the posterior commissure at the time of admission, followed by a discharge, with scalding on micturition. There were three small chancroids in the posterior commissure. The chancroids were touched with carbolic acid and dressed with iodoform. On the 29th of November, the parts having healed, a further examination was made, when no vagina was found; the meatus urinarius and urethra were very much enlarged. The sores above mentioned prevented an earlier examination. The labia are well developed. An examination was made by Dr. Ferguson, with Dr. Walter R. Gillette and Dr. E. S. Peck. They failed to find a uterus or ovaries. Investigation was made by the finger in the urethra; also bimanual touch through the rectum, and by sounds. The outer portion of the urethra was greatly dilated; she did not have incontinence of urine. She was well developed—breasts well formed, also the nipples. The mons of normal size. The labia nymphæ and clitoris presented the usual appearance. In this very remarkable case the unusual feature is exhibited of a urethra largely distended, with no incontinence of urine.—*The Planet, New York.*

REPORT OF A CASE OF CYANOSIS IN WHICH THE INTERAURICULAR AND INTERVENTRICULAR SEPTA WERE BOTH DEFICIENT.—A correspondent has sent us an interesting report under the above title, but has omitted to affix his name. We shall be pleased to hear from him.

ECHINOCOCCI IN THE LIVER OF A CAMEL.—A large camel from the Central Park was brought to the hospital of the Columbia Veterinary College almost in a state of collapse. No previous history was obtained. The animal was only in the building for a few hours. At the necropsy the principal lesion worthy of note was found in the liver, which was filled with hydatid cysts, which resulted from the migration of the larvæ of the tænia ecchinococci. These cysts were in various states of retrograde change. Some were almost calcareous, some in a suppurative state, and some nearly cystic. The hooklets diagnostic of this lesion were easily demonstrated.—*Journ. of Comp. Medicine.*

A CASE OF TRANSMISSION OF TUBERCLE FROM THE HUMAN SPECIES TO THE DOMESTIC CAT.—In the culture of medical science in these days the question of the transmission of tubercle from animals to man is proposed. I take the liberty of narrating a fact referable to a diametrically opposite problem, namely, the transmission of tubercle from man to animals. The case was that of a cat, two years of age, which died tuberculous after having repeatedly eaten the expectorated matter from a lady who died soon after of phthisis. On my first visit, by request of the owner of the cat, the animal presented a cadaveric appearance, with a physiognomy of suffering, and stiff and lustreless hair. For some time previous it was noticed that it had lost its natural beauty and vigor, lost appetite and suffered from severe cough and other symptoms which threatened a fatal termination. The cat died and I made a post-mortem examination which verified my diagnosis. It was true tuberculosis. On opening the thoracic cavity I found white nodules of irregular form disseminated throughout the entire substance of both lungs, isolated or confluent and varying in size from millet seed to a grain of corn. I found some of these tubercles on the costal pleura, some on the pericardium, and, note the circumstance, only one (of the size of a grain of wheat) on the right side of the heart near the apex. I did not have time to examine these nodules microscopically. Examined thus superficially I found variation in their consistency, some hard and calcareous, others soft and containing pus. Will these data be sufficient to prove the cat tuberculous? I believe so. (G. Brezzo *in Il medico Veterinariio*).—*Journ. of Comp. Medicine.*

DENVER, COLORADO.—There are more physicians in Denver in proportion to the population than in any other city in the United States, says the Denver *Medical Times.* A Microscopical Society has recently been organized and a Woman's Hospital established.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 5 NEW YORK, AUGUST 4, 1883

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Original Articles.

ON SOME RECENT ADVANCES IN THE SURGERY OF THE URINARY ORGANS.

BEING THE ADDRESS ON SURGERY DELIVERED BEFORE THE FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, AT LIVERPOOL, ON AUGUST 1, 1883.

BY REGINALD HARRISON, F.R.C.S.,

SURGEON TO THE LIVERPOOL ROYAL INFIRMARY.

(Special for THE MEDICAL RECORD.)

Mr. President and Gentlemen:

THE honor of addressing you on this occasion having been conferred upon me by your Council, I cannot enter upon the task that is before me without expressing my consciousness of inability to accomplish it in the manner I would desire. This sense of insufficiency is by no means lessened when I look at the names of those who have preceded me; when I remember the interest with which I, in common with you, listened to their words; and when I consider how completely abreast this great Association is kept by means of its *Journal* with everything relating to the advancement of surgery. On the other hand, long connection with this Association gives me the assurance of having to address a sympathizing audience, one disposed to overlook defects in any honest endeavor to set forth the advancements made in our art.

Surgery, I need hardly tell you, has long been cultivated in the new city which has now the honor of receiving you. The hospitals of Liverpool and their records show that the same ardor prevails here as elsewhere, both at home and abroad, while its position as a school of surgery indicates that it has entered not unsuccessfully into honorable rivalry with its competitors. But it may be asked, especially by those visiting Liverpool for the first time, Are there no traditions here? Are there no footprints of those who have left behind them works which place us in their debt, and which will render their names famous wherever and as long as surgery is known? It seems to me that one advantage connected with the itinerant character of our meetings is, that places suggest references to local celebrities of the past whose works cannot be thought over without advantage. In our desire to push forward, we sometimes forget to look back, and to reflect upon that which has been achieved and how it was brought about. Such reflections cannot fail to be of service in reminding us that surgery is not entirely of modern creation, that we have a few distant relations whose connection it is desirable to keep up, and that there still remain links which associate us with the great ones of the past. These links connect us, not here alone, but everywhere, with the names of Park and Alanson, to whose work I now wish for a moment to refer.

Henry Park was surgeon to the Royal Infirmary from 1767 to 1798. I cannot do better than quote a passage which our local historian, Sir James Picton, has selected[1] as paying a deserved tribute to his memory: "In the latter portion of the last century, when a vigorous flash of originality seemed to light up the annals of surgery, Park, of the Liverpool Infirmary, may be said to have accomplished the first act of conservative surgery. His patient being a sailor, to whom the loss of a foot and leg would have been tantamount to the loss of his means of getting bread, determined him to make the experiment of simply excising the diseased part, the knee-joint, and retaining the foot and leg. This he did so successfully that, to use his own words, the patient some years after the operation 'made several voyages to sea, in which he was able to go aloft with considerable agility, and to perform all the duties of a seaman; that he was twice shipwrecked, and suffered great hardship without feeling any further complaint in that limb.' This was a crucial test of success, that should have stamped the operation as one of the greatest surgical triumphs of the time; but, like so many other great strides taken in that age of extreme vivication, it was in advance of its fellows, and was destined to be arrested for the better part of another half century."

I need not on this occasion dwell on the claims that excision of the knee-joint has to be regarded as one of the recognized operations in surgery. Though there may be differences of opinion in reference to the circumstances indicating it, there can be no doubt that it will for ever remain as a brilliant memorial of the surgeon whose name is associated with it.

Of Mr. Alanson, Park's colleague, and surgeon to the Royal Infirmary from 1770 to 1794—whose work has been aptly referred to by Mr. Sampson Gamgee[1] as "one of those forgotten surgical classics which I would venture strongly to impress on the attention of my younger brethren"—I will speak in the following passage from the Presidential Address of the late Dr. Vose, delivered on the last occasion this Association met in Liverpool: "To Mr. Alanson, formerly a surgeon to our Royal Infirmary, we are indebted for many important suggestions, made at a time when the science of hygiene was but little regarded anywhere. His remarks upon the ventilation of hospitals, the use of iron bedsteads, the necessity of frequent whitewashing, and the establishment of sanatoria in the pure air of the country for convalescent patients, testify to the correctness of his professional judgment and to his zeal for the welfare of his fellow-creatures. It is by his treatise upon amputation, however, that the memory of this gentleman, as an original thinker in surgery, has the strongest claims to our gratitude and regard. He tells us that among upward of forty amputations performed upon the old system, which had come under his notice, ten died of tetanus, two of bleeding, three from mortification, four from exhausting suppuration; while eighteen experienced hemorrhage, and nearly all had excessive fever. Most of the patients suffered from exfoliation of bone—conical stumps or wounds that would not heal. After the adoption of his improved method of procedure he had the satisfaction of being able to announce that out of upward of thirty amputations, taken indiscriminately, which were performed at the Infirmary, not one died, and none had secondary hemorrhage, while in a month after operation the wound was either altogether or as nearly as possible healed in all the cases.

As is well known, in Alanson's method of amputating, provision was made for the covering in of the bone, after its section, by the integuments.

Such, then, are illustrations of the useful work which was being done by surgeons in this comparatively modern

[1] Edinburgh Review, October, 1872.

[1] Transactions International Medical Congress, 1881, vol. ii., p. 352.

city about one hundred years ago. Gratitude for improvements the value of which is still fully and freely acknowledged justifies the foregoing brief references to the work of these distinguished men.

The selection of material for presenting to you to-day has occasioned me no little anxiety. Following immediately upon an address which will for ever render our jubilee year memorable—an address in which justice was done by the distinguished representative of surgery from Ireland to the great subject of surgical progress generally, whilst its prominent features were forcibly brought out, I may well hesitate where to tread.

In considering the position of surgery as detailed in Dr. Stokes' admirable address, the thought naturally occurs that its diffusion is as remarkable as its progress. Compare, for example, the condition of surgery prior to the existence of our Association with its position as set forth in the columns of our own *Journal*, or in those of the other great representative of medical opinion in this country—the *Lancet*. In the former period departures from the ordinary routine of surgical procedure were confined to a few hands, and the benefits resulting from improved methods of treatment were shared in by a very limited number. Now, no sooner is a method of treatment or an operation proved to be efficient, than it is taken up and practised wherever scientific surgery can reach; the peer is no better off than the peasant, and the cottage hospital rivals in its successes its more palatial representative.

So beneficently catholic is our profession that it hails with the greatest satisfaction, not only the discovery of new means of relief, but the adaptation of others to a form which permits of their more general adoption and usefulness; while, on the other hand, it regards with suspicion all methods of treatment which unnecessarily restrict or conceal that which was intended for the common good.

I propose to occupy the remainder of the time at my disposal by a reference to some of the more recent advances and work in connection with the surgery of the urinary organs.

Commencing with the kidneys, we are at once struck with what surgery is doing for them. Until quite recently the diseases of these organs were regarded as belonging almost exclusively to the province of the physician, and probably they would have remained so had preventive medicine obtained fuller development.

A more extended acquaintance with the pathology of the kidney has brought to light conditions in which the work of the physician requires to be supplemented by that of the surgeon. Pain arising from an undue mobility of the organ, tumors, deposits, hemorrhages, and collections of fluid within it—all these morbid states are now recognized as capable of relief or cure by fixing, opening, or extirpating the abnormal or disordered organ; whilst numerous illustrations have already been afforded of the successful removal of stones from positions where they must have ultimately led to the disorganization of the kidney in which they had become impacted.

It would be premature at present to endeavor to formulate anything like precise rules in reference to the application of the various operations on the kidney to which I have briefly referred; they are at present comparatively new to us, and we must occupy ourselves in cautiously moving in the direction they indicate, and in collecting experience rather than in drawing conclusions other than very general ones.

Among many valuable contributions to the literature of this subject which have appeared, I would include one by Dr. R. P. Harris,[1] of Philadelphia, which contains an analysis of one hundred cases of nephrectomy. From this, as well as other communications which have more recently been published in this country, we may draw at least three conclusions of value, so far as the operation of extirpation of the kidney is concerned. These are—

First.—That nephrectomy has been the means of saving many lives under circumstances where no other method of treatment was likely to be of service.

Second.—That this operation has been practised in cases where the probability of a successful termination appeared to be very remote.

Third.—That a method of effecting the removal of the organ different from that which was selected, or a procedure less heroic, might, in some instances, have tended to increase the chances of success.

In these directions then—in selecting cases for operation, in rejecting others as unsuitable, and in determining relatively to the case in question the best method of procedure—I take it that good work has yet to be done.

It appears to me that among the difficulties we have to contend with in the application of nephrectomy, two stand out prominently: 1, the kidney it is proposed to remove may be the only one; 2, the opposite organ may be similarly affected, though in a less degree, yet sufficient to interfere with those compensatory changes being carried out which are essential when one excretory organ has to supply a lack of service on the part of another. The literature of this subject will already be found to illustrate the class of difficulties to which I am referring.

The lesser proceedings, which include the exploration of the kidney, and the removal of calculi and of pent-up fluid, are necessarily attended with a diminished risk, and have already proved of much value.

In undertaking a new class of operations, we must bear in mind the past history of many methods of treatment, now justly regarded as successes, but which severally had a very unpromising commencement. Look at the unsatisfactory position held by ovariotomy only within a period represented by the memory of the majority of us here present to-day. Yet the high dignity to which it has been raised in the rank of surgical operations, by the skill and enterprise of Sir Spencer Wells, Keith, and others is frankly and fully admitted by the whole medical world.

In the treatment of certain affections of the bladder we shall find that much progress has been made, and that the way has recently been opened for prosecuting other important advances. These will be chiefly illustrated by the modern practice of lithotrity and the treatment of tumors and intracystic growths.

Till a few years since the removal of stone from the bladder by crushing had been conducted on the lines laid down by Civiale some half-century ago. Though this method of proceeding has included amongst its advocates, past and present, surgeons of eminence, it cannot be said that as then practised it was either gaining ground or confidence. Indeed, I think I may say there was an increasing tendency to limit its application and to substitute lithotomy in all cases but those of the simplest kind. The mortality consequent upon the retention of broken calculi within the bladder was sufficient to induce all but the most ardent admirers of lithotrity to hesitate to give it the preference over a proceeding in which, whatever might be the risks, there was at least a guarantee that the whole of the stone had been removed.

While the surgical mind was thus to some extent in doubt as to the limits to which the crushing operation of stone might safely be pushed, two important communications followed rapidly upon each other. That both of them should have emanated from America merely indicates that the desire to advance the art of surgery is not limited to the old country, but is a natural outcome of advancing civilization and humanity.

The first of these papers was by Dr. Otis, of New York, who demonstrated beyond all reasonable doubt, and in a manner which had not previously been attempted, that the male urethra was capable of safely receiving far larger instruments than were generally employed. Following upon this, and probably influencing the views of the author, came Dr. Bigelow's paper on the removal of stone from the bladder by crushing and withdrawing it at

[1] American Journal of the Medical Sciences, July, 1882.

a single operation; the latter communication clearly showing that the bladder was tolerant of much more prolonged manipulation than had previously been believed.

It appears to me that the originality of Bigelow in no way detracted from the importance of the work that had previously been done in this country and elsewhere, or compromised the acumen of those who were most interested in the progress of this department of surgery.

That Bigelow's method of procedure is a great step in advance—that it has extended the limits of lithotrity and curtailed those of lithotomy—there cannot be the least doubt. But to suppose that it is capable of universal application, or ever likely to be so, is as unreasonable as to suppose that the art of surgery in no way differs from the art of administering Holloway's pills. But does the lithotrity of to-day represent the finality of its perfection? I trow not. When we consider what chemistry, electricity, and other agencies are doing—how physical force is in many directions being supplanted by other means—can we doubt that there are yet improvements in store in the methods of effecting the destruction of concretions within the body? Nay, are there not already significant indications that such improvements are nigh at hand? Is it likely that the fruit of the labors of Garrod, of William Roberts, of Ord, of Vandyke Carter, and others has been already gathered? May not a more perfect knowledge of the physical and physiological laws which regulate the production of concretions in the human body result not only in enabling us more surely to prevent them, but to destroy them?

Considering the great activity that has within recent years been shown in demonstrating the preventable nature of many diseases and the energy that has been displayed in grappling with them, it seems remarkable that no adequate steps should have been taken to ameliorate the hygienic condition of certain parts of this country where the amount of calculus disease is excessive and the inhabitants consequently are exposed to an inordinate risk of contracting it. The admirable address by Mr. Cadge before our Association at Norwich, in 1874, furnishes abundant data for the further prosecution of inquiries of this kind.

I cannot help thinking that if it could be shown to be even probable that the dogs, cats, rabbits, or frogs of the aforesaid districts were inconvenienced in a like manner with their owners, the matter would long ago have been forced upon our legislature with all the exaggeration that usually characterizes agitations of this kind.

Though surgery has invariably shown itself equal to the circumstances and emergencies with which it has been called to cope—though the prevalence of stone in a district has always been compensated for, as far as this is possible, by the appearance of those most competent to deal with it—these are no reasons why such conditions should be permitted to continue. Had time or occasion offered, I think it would not be difficult to prove that circumstances, either fortuitous or by design, have been found to exercise a marked influence in diminishing or increasing, in certain places, the tendency to calculus disease.

One word in reference to lithotomy before I leave the subject of stone. There is no great operation in surgery, I believe, which furnishes more successful results than this. Taking the experience of the two hospitals in this city with which I have been associated, I find there have been within my recollection one hundred and two cases of lithotomy in persons of all ages, but chiefly in children, and operated on either by my colleagues or by myself. In only five of these cases could I ascertain that a fatal result followed. My late esteemed friend, and our former associate, Mr. Southam, speaking of his own experience of lithotomy at Manchester, informed me that he had operated one hundred and twenty times, and could only recall one death. In the great majority of the Liverpool cases the stones were not exceedingly large, and I have no doubt that many of them might have been removed by lithotrity. I question, however, whether the small mortality these figures indicate would thereby have been still further diminished, even if the calculation were made on a basis corresponding with the most successful statistics in lithotrity that have hitherto been obtained.

Passing to tumors of the bladder, it is not surprising, seeing what has been done for tumors of the ovaries, uterus, and intestines, by Sir Spencer Wells, Keith, Lawson Tait, Treves, and others, that growths occupying the interior of the bladder should have received special attention. Though the literature relating to this subject has been of a somewhat fragmentary character, such compilations as Stein's recent work, "A Study of Tumors of the Bladder," conclusively show that some gratifying results have already been attained in both sexes. The great distress connected with this class of growth, the uncertainty as to the precise nature of the affection, in the first instance, and subsequently the kind of symptoms that accompany it, have naturally suggested the employment of means having for their object their removal by operation.

Sir Henry Thompson has done good service in giving prominence to the employment of digital exploration of the bladder, and in furnishing illustrations of the great advantage that this proceeding is capable of affording in suitable cases.

From a consideration of some of the extremely valuable records which have been published by various surgeons, where the bladder has been opened for the removal of tumors, it appears to me that it might have been better had the operative proceeding terminated with the detection and exploration of the growth by the finger. The chief dangers which experience has shown to be liable to attend the performance of this class of operations are:

1. The chance of rupturing a bladder, the coats of which have been rendered less resisting than natural.
2. The provocation of a hemorrhage which it has been found difficult to control.
3. An incomplete removal of the growth.

On the other hand, an examination of many tumors of this kind, of which villous growths or tufts furnish the best examples, shows that there is nothing in their connections or relations which need necessarily interfere with their complete removal. Precise information as to the presence and attachments of these growths we may now obtain with comparative safety. Whether their removal is to follow upon their discovery will be matter for further consideration.

With the view of extending our knowledge of these growths, a committee of this association is occupied in collecting information relating to them. The report of this committee, will, I hope, form the basis of an interesting discussion in the pathological section which will be opened by Mr. Paul.

I now come to speak of the prostate, and I shall do so in reference to the part it takes in obstructing micturition, for the reason that it is this symptom which in some form or other brings the patient under our care.

It appears to me that enlargement of the prostate is specially interesting to us in relation to its earliest and to its most advanced forms, and it is to these points that I shall more directly refer.

If we take the obstructive disorders of the urinary apparatus, and inquire what feature of them is most detrimental to the associated parts, the answer undoubtedly will be, the misdirection of the muscular force that is thereby entailed. How can we explain the structural alterations which take place behind the obstructed point, and which manifest themselves in different ways, except as the results of urinary retention and retrograding pressure? How frequently do we find, in cases of stricture or enlarged prostate, that the whole of the apparatus behind the primary constriction consists of little else than dilated saccules and tubes! Is not this back-pressure go-

ing on, though it may be imperceptible, from the moment that impediment arises to the escape of urine from the bladder? The more we study animal mechanics, either in their physiological or pathological application, the more can we appreciate the truism that force is never lost; if it is not permitted to act for good, it must be productive of evil; if it is not exerted toward the legitimate fulfilment of a normal act, it must inevitably exercise a corresponding pressure in an abnormal direction. Whenever I see in the post-mortem room an ordinary specimen of dilated kidney, tortuous ureter, or sacculated bladder, associated with an enlarged prostate or a stricture, the expression "misdirected force" almost involuntarily escapes from me.

Such considerations as these have long led me to believe that our treatment of prostatic stricture commences, as a rule, far too late; we delay until the bladder shows, by the formation of a pouch or a saccule behind the prostate, the first bad influence of back-pressure before we seek to rectify it.

I have endeavored to prove how much good may be done by the adoption of judicious mechanical treatment on the appearance of indications that the prostate is commencing to obstruct micturition, and I have founded my suggestion upon a condition which may be seen illustrated in any museum—viz., one in which, though the gland has become large, obstruction has not been known to occur. An extended adoption of this practice has convinced me that the pressing symptoms connected with an enlarging prostate may be kept in abeyance by the timely employment of those principles of treatment which are generally recognized as being applicable to any tubes within the body which are threatened with occlusion, and are within our reach.

In the more advanced forms of prostatic enlargement, where the bladder has been converted into a receptacle little better than a chronic abscess in which urine stagnates, surgery has done much to afford relief.

When the comfort that catheterism is capable of affording has ceased to be effectual, other plans of establishing a drain for the urine are at our disposal. It is not necessary that I should discuss the various means of effecting this; let me, however, say a few words in reference to two which have more recently come under notice; these are—first, incision into the bladder from the perineum, and secondly, paracentesis through the enlarged gland.

For the purpose of securing a more or less permanent channel for the escape of urine from the bladder, other than that by the urethra, I must admit that following the practice of Syme, and to some extent of Edward Cock, I have a decided preference for an incision through the perineum, on the twofold ground of safety and comfort. We have had numerous examples of the great advantage that cystotomy is capable of affording for bladder affections, dependent on a large prostate—none perhaps more striking than the case narrated by Mr. Lund, on the memorable occasion of the meeting in London of the International Medical Congress. The paper closes with this observation: "I have thus placed on record this case, unique in its character, and interesting and encouraging in its results, with the hope that should a similar case occur to any surgeon now present, he will not hesitate to give his patient the chance of benefit from a course of procedure so simple in its nature, and so likely to be followed by temporary, if not permanent, benefit."[1]

I may be permitted here to submit to your notice a method of puncturing the bladder through the enlarged prostate which has afforded very gratifying results. It consists in passing the trocar through the gland, and retaining it in the perineum, so as to afford a permanent as well as a convenient drain for the urine. I should have had more diffidence in commending this operation to your notice had it not received the approval of our distinguished associate, Professor Gross, whose contributions to the surgery of the urinary organs are held in deservedly high repute on both sides of the Atlantic.

Though the primary object of cystotomy, as usually practised, is merely to place the bladder at rest, by providing a continuous drain for the urine as well as the products of cystitis, it occurred to me, as it had already done to others, that it would be possible to extend this proceeding, with the view of removing those barriers to micturition which the hypertrophied gland so frequently presents.

It was to meet conditions such as these that Mercier introduced and practised division of the prostatic bar by means of a cutting instrument introduced along the urethra. This plan, though admirable in its conception, was open to the objection that in its execution it was necessarily uncertain, there being no means of ascertaining with certainty that the section was confined to the obstruction to be removed. On carefully considering the position of matters, as well as the proposals that had been made, it appeared to me more reasonable to attempt to divide the prostatic obstruction at the neck of the bladder from an opening made into the membranous urethra, than by means of instruments which had to traverse the whole length of the canal. I have recently brought under notice a case[1] in which I thought it desirable to explore the prostatic urethra from an opening made in the perineum, through which I was enabled to divide with precision a prostatic barrier. The division of this portion of the gland was followed by complete restoration of the power of micturition, and has so far proved of permanent advantage.

The proceeding which I have thus put into practice seems first to have suggested itself to Mr. Guthrie, but I cannot find that he ever employed it; that it is not identical with the somewhat extensive incision of the prostate as for lateral lithotomy which was practised by Sir William Blizard is at once obvious. Its aim is to divide the obstruction—and the obstruction alone—by an opening so planned as not to expose the patient to undue risk; while, at the same time, it is capable of affording the greatest amount of room for manipulation by an extension of the incision, should this prove to be necessary.

I need hardly observe that a proceeding of this kind should be undertaken before the bladder has passed into a condition of confirmed and irremediable atrophy; otherwise, though we may succeed in removing an obstacle to the introduction of the catheter, our prospect of restoring the power of micturition will be as hopeless as it has proved to be under somewhat similar circumstances where the operation of lithotomy has been undertaken.

It is impossible to avoid the conclusion, from their examination after death, that many atonied bladders might have been prevented becoming so by the timely removal of the obstruction by which a condition of permanent paralysis was induced and maintained.

The operative treatment of the enlarged prostate, when it obstructs micturition to a degree that cannot be met by judicious catheterism, is yet, I believe, open to considerable improvement.

Though the literature relating to either complete or partial excision of the prostate is very limited, there is much in it of promise. In one case, where I extirpated the whole gland for malignant disease, the benefit that followed far exceeded my expectations. It was that of a middle-aged man, who, by reason of a carcinomatous prostate, was threatened with a speedy and painful death. I cut down upon the gland in the median line, and succeeded in enucleating it tolerably cleanly with my finger. I saw this patient eight months afterward in very fair health, and quite able to go about his business. So far he has enjoyed an immunity from the symptoms which induced me to perform this operation, and though his

[1] Transactions International Medical Congress, vol. ii.

[1] British Medical Journal, June 9, 1883.

disease is a malignant one, we have every reason to be content with the results obtained.

Then we have numerous examples where considerable masses of the prostate have been removed with very great advantage in the course of operations on the bladder. Amongst these I would specially mention an important case by Mr. Bickersteth; and, more recently, another by Dr. John Ashhurst, of Philadelphia, in which the whole of an enlarged third lobe was successfully removed.

Cases such as these seem to favor the hope that operative surgery will be found capable of affording more relief to exceptional instances of this kind, and of extending to the large prostate the treatment which in some degree is applicable to other deep-seated growths.

Passing to the urethra, I would again take the opportunity of adverting to the value of Otis's work in regard to the dimension and dilatability of this canal; if he had done no more than contribute to the improvement of lithotrity—and this cannot be questioned—we should still be largely in his debt. I cannot, however, follow him in his views relating to the performance of internal urethrotomy as a means of treating stricture of the urethra. My impression is that this operation is losing instead of gaining ground in the opinion of those who have had ample opportunities of judging fairly of its merits. That it is an operation fitted for the treatment of stricture in its early stage is a conclusion I am disposed to take exception to, on the ground that it is neither necessary nor safe as compared with other methods. I believe that the early stage of stricture may be successfully combated by the employment of thorough cleanliness combined with the judicious use of dilatation, as we are accustomed to practise it in this country.

If internal urethrotomy gave a greater immunity than other operations from a recurrence of stricture, or did away with the necessity for subsequent mechanical dilatation, then, perhaps, with the view of avoiding other risks to which all persons suffering from stricture are liable, we might feel more disposed to employ it. But as such is not the case, and the risk attending its performance is not inconsiderable, I cannot concede the importance which is claimed for it by its numerous admirers. That internal urethrotomy in some cases is a necessity—as by it we are enabled to render amenable to treatment a stricture heretofore intractable—I am willing to admit, but to recommend it as capable of effecting a permanent cure is quite another thing.

The treatment of impassable stricture of the urethra has received an important addition by the practice which Mr. Wheelhouse has introduced, the great credit of which he seems desirous rather of sharing with his surgical colleagues than of appropriating to himself, as I see he always refers to it as the "Leeds operation." Like other conditions which may be spoken of as relative to something else, rather than as fixed or defined, the impassable stricture is, I believe, gradually becoming rarer, a circumstance which is largely due to the great improvement that has taken place in the construction of instruments specially adapted to their treatment, amongst which I may mention the filiform bougies and the tunnelled instruments of Gouley, of New York. For the purpose intended, I do not think there is any proceeding equal to that which Mr. Wheelhouse has introduced, and I have no hesitation in including it among the improvements to which I am now referring.

Permit me, without apology, in this mechanical age, where invention after invention for the treatment of stricture comes upon us with marvellous rapidity, to claim a moment's consideration for what Mr. Savory has called the medical aspect of this question. We all know what irritation is: there is such a thing as irritating a stricture, either by what passes through it naturally or is introduced to correct it. Let us not disregard, as a principle of our treatment, the importance of securing for the urethra that physiological rest of which the late Hilton wrote so well.

The question may here very properly be asked whether, in our search for novelties as improvements in treatment, we have discovered any new diseases, the better management of which, by reason of our recent acquaintance with them, we may in all fairness leave to our descendants to determine. The admirable Bradshaw Address of Sir James Paget will no doubt have the effect of quickening our perceptions in this direction.

Though I cannot point to any discoveries of this kind as affecting the region which is now occupying our attention, I may note one gratifying result of extended clinical and pathological investigation: I refer to the juster assignment of symptoms to the causes producing them—symptoms which not very long ago were looked upon as constituting independent diseases. But if we have not discovered any new diseases, we must remember that varying circumstances may at one time add intensity to some disorders and considerably modify the progress of others. I have a strong impression that the times through which we are passing, characterized as they are by the production of great and continuous nerve-tension, have brought into prominence a state of brain-strain which is apt to show itself in any organ which may happen to be deranged or is overtaxed.

A recent author seemed rather to conclude that tension of this kind was most injuriously shown and felt by our American cousin, while the Britisher, for some reason or other, was less injuriously influenced in this manner. Whether this is so or not I am not prepared to decide, but I am disposed to believe that purely nervous affections—affections associated, as far as we can determine, with no obvious structural alteration—are more common than they used to be. That they occasion much distress and cause persons who suffer from them to be unduly apprehensive will be generally admitted. Nay, further, by their mimicry of more certain diseases, they induce a condition of suspense which is often intolerable. It is well, too, to bear in mind that the interpretation of symptoms, as also their prevention and amendment, are frequently to a large extent dependent on a recognition of the possible existence in a patient of exaggerated nerve-tension.

Before an audience of this kind it would be presumptuous on my part to indicate in detail the many improvements that have taken place in the treatment of the surgical disorders of the urinary organs; further, where there have been so many contributors toward this progress it would be invidious in me to particularize.

Let me, however, in common fairness, say one word in reference to the advance that has been steadily made in the construction of the appliances used for these purposes.

I can remember some instruments which five-and-twenty years ago, or even less, were then regarded as improvements, but have now passed into obscurity or to the shelves of the museum. In no department of applied mechanics has greater perfection been obtained than by the surgical mechanician, and nowhere is this better illustrated than in the instruments employed in the treatment of urinary diseases.

It seems almost ungenerous, after referring to several proceedings of an operative kind, the doing of which entail pain and involve risk for the sake of advantages to follow, that I should allow to pass unnoticed the work of those who have removed the one and lessened the other. In chloroform and anæsthetics we have a priceless boon, without which surgery would long ago have been at a stand-still, and many persons now living in comfort and enjoyment would ere this have ceased to exist. I am not old enough to remember the pre-anæsthetic age, and, therefore, am unable to draw a contrast which will be a vivid one to some of the 'elder brethren' I am addressing to-day. I am reminded, however, of an incident bearing upon such a contrast, which with your permission I will briefly relate.

Some two years ago a sea captain, a patient of mine,

and by no means a bad amateur doctor, on returning from sea, told me somewhat gleefully that he had successfully performed amputation. Whilst his ship was at Ruruta, an uncivilized island in the South Pacific, a poor native got his arm entangled in a sugar-crushing machine. As there was no doctor on the island, my friend the captain was summoned, and at once recognized the necessity for removing the shattered fragments of the limb. The shrieks and struggles of the powerful aboriginal were most fearful. Recognizing the necessity for taking steps to save the man's life, the captain hurried off to his ship, and returned with the necessary implements, and, in addition, a quart of the newest and most potent rum. In the absence of chloroform he induced his patient to swallow this fiery compound, wineglassful after wineglassful, until intoxication was induced, and subsequently profound alcoholic insensibility. Then the tourniquet was applied and amputation successfully performed. Recovery rapidly took place. So pleased was the savage with the effect of anæsthesia that he subsequently offered to let my friend cut off some of his toes provided that the process of inducing insensibility was repeated.

Next in importance to chloroform and anæsthetics are those means which have been recently promulgated for diminishing some of the greater risks contingent upon wounds and surgical operations. About antiseptics, I desire to speak in no uncertain terms. Though our views may not be unanimous, though some of us may be skeptical about the import of germs and of sprays and other details, can we doubt that when the surgical historian of the nineteenth century has to recount the men as well as the measures that have favorably influenced the progress our art has made, the name of Lister will occupy a conspicuous place?

I have now done: it has not been my ambition to hold up to you a golden calf, to attempt to dress it in flowers of rhetoric and to ask you to worship it. I have rather endeavored to remind you of some of the directions in which surgery is now travelling and to estimate in a measure the pace at which it is going. It is impossible to engage in a work of this kind without being fully conscious that though our art is an imperfect one, it is distinctly a progressive one. In the course of your visit to this, which has been aptly referred to as the second city of the empire, you will find almost all the arts and sciences laid under contribution for the development of commercial enterprise. The activity displayed in the development of trade and commerce will probably suggest the inquiry whether we are equally progressive, whether we are in correspondence with the times in which we live.

There need, however, be no hesitation in asserting that, whether we are regarded as preventers of disease, or as practitioners of surgery or of medicine, every one of us in his daily practice carries with him a proof that year by year something additional is contributed by our profession to the comfort and the life of man.

Danger of Ergot in Locomotor Ataxia.—Dr. J. Grasset relates the case of a patient, thirty-eight years of age, suffering from progressive locomotor ataxia, to whom Charcot gave ergotine in doses gradually increased from four grains to fifteen grains daily. When the dose had reached the latter figure the patient became, with but slight warning, totally paralyzed; sensibility at the same time was markedly diminished. As soon as the drug was stopped the paralysis quickly disappeared, leaving the original trouble slightly increased. The author recalls the investigations of Tuczeck into the changes in the posterior columns in ergotism; those would indicate that ergot will not only not cure ataxia, but can even, under certain circumstances, induce sclerosis of the posterior columns. In any case, great care should be used in the administration of ergot in this disease.

ON FÖRSTERS OPERATION FOR RIPENING IMMATURE CATARACT.

By HENRY D. NOYES, M.D.,

NEW YORK.

The rule is founded upon long experience, and is in the main sound, that a cataract should not be extracted until it is wholly opaque. So long as a patient can count fingers it is held not proper to operate. To this rule exception is made in the case of cataracts which progress with great slowness, and as they mature exhibit a deep amber or mahogany hue, or sometimes only a smoky tint and seem to have no cortical layers. Such cataracts are very hard and uniform, and never become so deeply opaque as to make it impossible for the patient to count fingers within a foot's distance. It is good practice to extract such lenses, and they generally do well. But for the commoner forms of cataract, in which opaque and transparent parts are intermingled, permitting the fundus to be illuminated with the ophthalmoscope and giving back a red reflex it is the recognized rule to postpone operating until the lens has, as the phrase is, grown ripe. The reason is that the lens separates from the capsule imperfectly, and leaves a residuum of semi-transparent material which evades expulsion and may bring on serious inflammation, either in the iris or in the capsule, or in both. Fortunately it is seldom that cataract begins at the same epoch or progresses at the same rate in each eye. Hence a patient usually has one cataract ready for removal before useful vision has ceased in the other eye. To all this good fortune does not occur.

It will be inferred that the writer approves of operating for cataract when *one* eye is fully ready for its performance. There is scarcely any dissent from this approval at the present day, provided the second eye begins to be seriously implicated in the disease. It is, however, not superfluous to call attention to this point, because the feeling exists among the laity, and to some extent among physicians, that an operation should not be done until the patient is quite blind in *both* eyes. Formerly the proportion of failures was so considerable and the rigor of after treatment was such as to make the operation a serious matter, and hence the inclination to wait for complete blindness in both eyes. As stated, the judgment of ophthalmic surgeons is in favor of operating so soon as one eye is ready, and in case the second eye begins to exhibit cataract. This is the general judgment, notwithstanding what is known respecting the occasional occurrence of sympathetic inflammation in the fellow eye.

In one eye the lens may be decidedly opaque, but the broad shadow at the edge of the pupil shows that its superficial layers are semi-transparent and sticky, while in the other eye the irritative symptoms which often attend the beginning of lenticular opacity make work difficult, although there may remain the capacity to read ordinary print. On the other hand there may be little difference in the degree of opacity in the two eyes.

Again, the patient may have lost one eye through accident, or some other disease than cataract, and in the remaining eye lenticular changes have begun.

When the patient can no longer do fine work, such as sewing, or writing, or reading ordinary print, or cannot follow his occupation, he may for months or years retain vision sufficient to count fingers at one foot. During this period he can feed and dress himself, and may walk about in safety. But he finds his situation most trying. The great trouble is want of occupation, and many complain bitterly of the tedious idleness which they have to endure.

It will be readily appreciated that weariness of mind may act unfavorably on the state of health, and inasmuch as predictions as to the rate of progress of cataract cannot be made with any definiteness we leave a patient small consolation when we tell him it is better to wait

for the lens to ripen, than to take the risks of failure by a premature operation.

It was once a common practice, now less frequently resorted to, to perform iridectomy some weeks prior to extraction, to diminish the risks of the operation. I have noticed that immature cataracts appeared to grow opaque more rapidly after the iridectomy than they did before. This incidental effect has not been kept in view as an indication for the operation, but it deserves mention.

It has been proposed to bring about full opacification of cataract by discission of the capsule with a needle. It would appear that this proceeding might justly be employed in view of the experiences of the late Mr. Jacobs of Dublin, who favored the treatment of senile cataracts by discission alone. But surgeons have seldom adopted the needling operation either to ripen or to cure senile cataract. As a means of cure the proceeding calls for too much time, as a method of ripening cataract. It is apt to be ineffectual and as I have verified by experience it is not devoid of danger.

Mooren ("Fünf Lustren Ophthalmologischer Wirksamkeit," 1882, page 207) gives his experience on this point to the following effect. That in all cases of arterial sclerosis, and whenever there is undue tension of the globe, no operation for artificially ripening cataract should be performed. If done, glaucomatous complications will be almost certain. In other cases Mooren resorts to the following method. An iridectomy is first made, and the greatest care must be given to the avoidance of pupillary adhesions afterward. About three weeks afterward he opens the capsule, not with a needle but with a Graefe's knife for about three-fourths its diameter from above downward, and takes the utmost pains to avoid luxation of the lens. For two days the patient is kept in bed. Ripening ensues in from a few days to a few weeks, according to the quality of the lens. Great respect is due to Mooren's opinions on such a subject, because he has had an uncommonly large experience with cataract. He reports (p. 211) having performed two thousand three hundred and thirty extractions by what he calls the scleral incision. It is also to be said that the technical skill and the judicial capacity which he possesses will greatly surpass what ordinary operators can claim.

It is to be desired that the least danger should be incurred in all operations in the eye, and the method of artificially maturing cataract now to be described seems worthy of cultivation.

Within two years Professor Förster, of Breslau, Germany, has published an account of a method for bringing about the maturity of cataract which seems worthy of imitation. His proceeding was made known to the Ophthalmological Congress of Heidelberg in 1881, and afterward announced in the International Congress of London in 1882. He has also written about it in *Archives of Ophthalmology*, vol. xi., No. 3, p. 344, 1881. He performs iridectomy upward, and while the anterior chamber is empty strikes or rubs the cornea with the convexity of the iris forceps or with the convex portion of a strabismus hook. In doing this rather firm pressure is made upon the lens as it now lies against the cornea, and the friction is chiefly confined within the area of the pupil and of the coloboma. The manœuvre is similar to that commonly employed for expelling blood from the anterior chamber, but the pressure is deeper. Necessarily care must be taken not to dislocate the lens and not to cause prolapse of vitreous. The instrument which I have employed in all cases but one has been a Daviel's silver curette or a narrow spoon of hard rubber.

The movements are mostly in a rotary direction, and are continued for perhaps a minute, but I cannot pretend to say for how long time they were kept up, any more than I can tell how much pressure was employed. (The manœuvre has been entitled trituration of the lens, but this surely is a stronger word than the facts warrant. It were better, perhaps, to speak of it as massage or compression.)

My experience extends to eight cases, which are summarized in the following table:

No.	Name, sex, age, date of operation.	Duration and incidents of treatment.	Period of maturity.	Extraction of cataract—incidents.	Result—vision.
1	Mrs. S——, female, 68, March 23, 1882.	Five days, slight iritis.	Three months.	October 10, 1882, ten days, Graefe, normal.	$V = \frac{10}{10}+$.
2	Mrs. Meta J——, female, 70, April 14, 1882.	Seventeen days, iritis severe.	Three months.	July 14, 1882, Graefe, severe iritis, forty-three days.	After iridectomy, October 29, 1882, $V = \frac{1}{10}$.
3	Mrs. Ellen McC——, female, 70, May 5, 1882.	Seven days, normal.	Five days.	October, 1882, Graefe, normal, eighteen days.	$V = \frac{10}{10}$.
4	Patrick C——, male, 45, May 19, 1882.	Ten days, normal.	Two months.	July 14, 1882, Graefe, normal, fourteen days.	$V = \frac{10}{10}$.
5	Matthew T——, male, 62, October 20, 1882.	Five days, normal.	One month.	November 24, 1882, Graefe, normal, fourteen days.	After two cystotomies $V = \frac{10}{10}$.
6	Mrs. Meta J——, female, 71, February 16, 1883.	Seventeen days, considerable reaction, but no iritic adhesions.	Three months.	May 28, 1883, twenty-nine days, mild iridocapsulitis.	Thin membrane in pupil—awaiting cystotomy—$V = \frac{1}{100}$.
7	Mrs. Mary S——, female, 61, May 18, 1883.	Seven days, normal.	One week.	June 30, 1883, eighteen days, normal.	Thin membrane in pupil—awaiting operation.
8	Thos. McC——, male, 70, May 25, 1883.	Seven days, normal.	Three weeks.	Extraction not performed.	

In all cases the subjects were above sixty years of age. Four were females, three were males. In one female both eyes were operated on at an interval of ten months. In this patient alone did any serious reaction take place—and this occurred in both eyes, and at both operations for ripening, and also at the extraction of the lenses. When her first eye was operated on severe iritis followed Förster's method (Case 2), and numerous posterior synechiæ occurred. The extraction was done three months later, and was not as normal in its performance as I could have wished. For this reason, as well as because of the irritable condition of the eye, the healing occupied a long period (forty-three days), a dense membrane formed in the pupil and iridectomy became needful. The ultimate result, $V = \frac{1}{10}$, was good. The patient desired to have the other eye treated, and better fortune attended the operations, but it was evident that she was unusually prone to inflammatory reaction. The result in this eye is yet incomplete, because a thin pupillary membrane remains to be divided (Case 6). In one other case, viz., No. 1, iritis, with few synechiæ took place, but no prejudicial effect was thereby produced. The period of confinement after Förster's operation varied from seven to seventeen days, the average was 9.4 days. In one patient, Cases 2 and 6, cataract had for four years been in the stage which prevented "working" sight. In other patients the period which had elapsed since they could see to work was from a few months to a year. The exact period was not always obtained.

The time required to mature the cataract varied from five days to three months. The long period occurred in two patients, viz.: in Case 1 and Cases 2 and 6. The latter, who had the most severe experience, had cataracts which were devoid of all cortical opacity, and the ripening process was slow. Cases 3, 5, 7, and 8 had abundant cortical opacity, and the effect in them was prompt and without unpleasant reaction. In none of the cases did the lens seem to swell or did any glaucomatous symptoms arise. It would not be prudent to say that such mishaps might not take place, the presumption is that swelling of the lens would occur, and if so, glaucomatous complications would be expected. It is, however, safe to state that such accidents are far less likely than after Mooren's method of incising the capsule.

It will be observed that in no instance was the extraction done sooner than two months, while in some cases it was not done until six months after the accelerating iridectomy. The postponement was not in all cases because of unreadiness of the cataract. An increase in opacity was in all cases noted as ensuing immediately, but the rate of increase was not always alike. It did not show itself chiefly upon the anterior surface of the lens, but seemed to come up from the deeper layers. It did not appear to depend on direct disintegration of the lens-fibres or of the capsular epithelium, but rather it may be conjectured, on disturbance of the suspensory ligament. It was much more regular and evenly distributed than the opacity which takes place after a traumatic interference, by a needle or by a foreign body.

It is too much to expect of an operation that it should never present a shady side, and this larger experience will doubtless bring out. I have heard a case verbally reported which was followed by irido-cyclitis and loss of the eye, and we know that iridectomy alone is sometimes followed by loss of the eye. I have stated that, in two of my operations there was some reaction on the part of the iris. It follows that the operator must not venture with a heavy hand, and must confine his friction to the centre or the cornea, while the moderate experience already collected indicates that Förster's proceeding merits further trial.

ON THE TREATMENT OF NON-SPECIFIC ULCERS OF THE LEG.[1]

By SMITH BAKER, M.D.,
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To engage successfully in the treatment of ulcers of the leg, whether indolent or irritable, requires a most exact appreciation of the system as well as the local condition.

General or specific debility from any cause, near or remote interference with the local blood-supply, irritation of the nerves proceeding to the part, mechanical or chemical irritation of the part itself, are all important factors in the etiology of cutaneous ulceration, and are just as important in retarding progress toward recovery.

Writers upon this subject generally recognize this more or less, as a cursory survey of the more recent literature reveals.

Thus, whether it be Christopher Heath's[2] opium, arsenic, and potassium iodide treatment; or the skin-transplanting and grafting plan of Drs. Hamilton[3] and Bryant;[4] or the subcutaneous resection of the irritable and irritating nerve, as taught by Mr. Hilton;[5] or the local application of emollient and nutritive substances, as suggested and practised by Dr. Cowen;[6] or Mr. Holt's[7] plan of removing all hypertrophic tissue, elevating the leg, sealing hermetically, and attending strictly to the general health; or that of Dr. Braithwaite,[8] which consists in applying lead lotion, plus a small proportion of carbolic acid, and exposing several hours to the air; or the exercise, poultice, chalk and lard treatment of Dr. Spender;[1] or that by Dr. Mandelbaum[2] by scraping the surface, applying iodoform, and following with equal parts of mercurial and soap plaster; or the pure-rubber bandage treatment of Dr. Martin; or the combination of the latter with the local application of liquor carbo-detergens, as carried out by Mr. Hutchinson;[3] or the use of a saturated solution of potassium chlorate, as advocated by Dr. Rochester; there is in each an attempt to apprehend the etiology as well as the indications for treatment.

Yet many general practitioners seem to fail in this respect. They apparently forget that the application of caustics when the system is already debilitated, the giving of tonics when there is every evidence of good health save the local affection, the effort to secure resolution by attention to the special locality where the nervous or circulatory system is at fault, is in each case an endeavor to accomplish the impossible.

This is suggested by reference to one of my earlier cases.

CASE I.—A buxom, hardworking widow, aged forty, mother of five children, and of no particular constitutional taint, received a blow on the inner aspect of the right leg, which in five weeks after had resulted in an ulcer $2\frac{1}{2} \times 4$ ctm., having a dry surface, and so sensitive as not to allow of the application of the softest poultice. A weak lotion of carbolic and hydrocyanic acids, glycerine, and water, freely applied and covered with oiled silk, relieved the pain at once, and by touching edges with silver nitrate and painting vicinity with tr. iodine, healing to the extent of one-half was secured in twenty days, and nine-tenths in twenty days more. At this point, however, it resisted all efforts until the fourth month, when it healed of itself.

Now in this case there were three months required, three-fourths of which time was lost time simply because bandaging was not adopted and the slight œdema of the adjacent subcutaneous connective tissue kept down—thereby relieving the skin tension, and permitting a reparation of the local nutritive processes. This case may be contrasted with the following:

CASE II.—An unmarried, scrawny woman aged forty, with catamenia still regular, a hard-working weaver, had, during most of the time for eighteen years suffered from an ulcer of the left leg, with a thin edge and irritable surface, and quite as much from the different plans of treatment proposed and carried out by many doctors. Five applications of galvanism (positive pole to the ulcer) plus the alternate use of potassium permanganate and potassium chlorate lotions, and the daily wearing of a well and snug-fitting elastic stocking soon enabled her to assume her duties, and secure a healed leg in addition.

The indications to clean and support the part, and to encourage a better nutrition, were here met as the result attests.

CASE III.—Married woman, aged forty-nine, housewife, mother of several children, who at the age of fourteen suffered a severe strain and some injury of the lumbar region, which was treated *by two years in bed, sixteen setons, and innumerable blisters to the back!* Since then she has had a frequently recurring, irritable ulcer on the right leg, which is always preceded by pain in, and tenderness over, the lumbar vertebra, and frequently by pain in left ovarian region, with dysmenorrhœa and profuse leucorrhœa. These ulcers have always defied the efforts of the neighborhood surgeons, and after long sieges have healed of themselves. She came to me with a recently ulcerated surface of 8 ctm. in diameter, surrounded extensively by eczema, and which had been preceded as usual by several weeks of backache. The use of ergot and potassium bromide internally, and of a weak carbolic acid lotion externally, secured resolution in about three weeks. This case seems to show, as

[1] Read before the Oneida County Medical Society.
[2] Practitioner, 1869.
[3] New York Medical Journal, 1871.
[4] British Medical Journal, 1872.
[5] Rest and Pain, New York, 1879.
[6] London Lancet, 1872.
[7] Braithwaite's Retrospect, 1873.
[8] British Medical Journal, 1873.

[1] London Lancet, 1873.
[2] Medical Abstract, 1877.
[3] Medical Times and Gazette, 1878.

Charent' says, "there is nothing better established in pathology than the existence of trophical troubles consequent on lesions of the nervous centres or of the nerves."

CASE IV.—An Englishwoman, aged ninety-three, the last child of a consumptive family, the mother of seven children—two of whom were delivered with forceps, and all but one of whom have died of tuberculosis—herself a lifelong sufferer from neuralgic troubles, also from severe deafness for fifty years, and from complete prolapsus uteri for forty years, had at the age of seventy-six a severe illness, which was followed by a three years' standing ulcer of the left leg, which at the end of this time healed spontaneously. Five years after she took to crutches (aged eighty-four), but otherwise enjoying her usual health. Two years ago she accidentally injured the inner aspect of the left leg, and got, in due time, under domestic care, as a result, a large, irritable, indolent ulcer, which resisted all treatment for weeks, but finally healed under the use of salicylic acid in vaseline. Nine months since, however, it broke out again, and after three months was found to be $3\frac{1}{2} \times 6\frac{1}{2}$ ctm., and so sensitive that a breath of air caused intense suffering. An attempt to use a Martin bandage was hopelessly frustrated by her whimsical repugnance to its use. A severe prostration from diarrhœa supervened, and after this for weeks, although a multitude of plans were faithfully tried, there was no progress toward recovery. Finally, by simply alternating a lotion of potassium permanganate with one of potassium chlorate, the ulcer has, three months since, entirely healed.

In this case the extremely low vitality and interference of the patient nearly negatived all efforts at treatment. The result under the circumstances may be considered a happy one.

And it is equally true that lowered vitality from any cause may favor the development of any case of non-specific ulcer of the leg; while subsequent irritation, whether from mechanical or chemical sources, may be the means by which the cutaneous necrobiosis is kept up.

Hence treatment may be considered as properly consisting of giving tonics when needed, and especially will galvanism, phosphorus, and strychnia be found indicated in a large proportion of cases; or of allaying nerve-irritation or irritability by exhibiting opium, potassium, bromide, or ergot; and of attending strictly to hygiene, which includes specifically cheerful surroundings, *exercise*, and good food.

As regards local treatment, there are only two important indications, namely, cleanliness and protection.

For what do the various lotions and applications more than to clean the sore of the discharge that has become decomposed and consequently irritating, and to prevent further decomposition from taking place? and what does the bandaging or strapping more than to protect the sore from engorged blood-vessels and œdematous adjacent tissue, or from external irritants of all kinds?

Hence what can be better for local treatment than to order the surface cleansed thoroughly at bedtime with a weak solution of potassium permanganate, also in the morning with a medium solution of potassium chlorate, and after having covered it lightly with absorbent cotton, to have drawn on over all a *well and snug-fitting* elastic stocking, with instructions to go about the usual labor using the limb freely but not senselessly? At any rate, in nine-tenths of cases this, according to my recent experience, seems to be all-sufficient; while in the other one-tenth a few days rest and preliminary treatment with the same lotions and a pure-rubber bandage seems to be equally necessary.

This plan of treatment is simple, and perhaps not convincing. But I am satisfied that in this plan lies the disposal of the whole class of non-specific ulcers, securing a minimum of suffering and loss of time to the patient, and a maximum of credit to the profession.

Lectures on Diseases of the Nervous System, 1879.

THE TREATMENT OF CHRONIC BRONCHITIS.

BY T. J. YOUNT, M.D.,
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"WINTER cough" has been known for untold centuries. Nebuchadnezzar no doubt had this disease, for the physicians after dosing him with villanous decoctions, nauseous infusions, and diabolical extracts, turned him out to grass. They did not find a single specific or panacea in all the medical literature of their forefathers for chronic bronchitis. The chronic bronchitic then, as now, was a victim to be pitied.

During the winter and spring months he sits in the house, in a snug corner near a roaring fire, huddling together his skin and bones lest they get separated and lost. He sits there in his corner with his cuspidor handy, morose, dejected, and irritable to those around him. His face is pinched and his color yellow, he eats little and sleeps less, worried and worn out with cough. In the summer, like the ground-hog, he comes from his hole, wrapped up in a thick ulster with fur collar, and cap drawn down over his ears, and his feet encased in large arctic overshoes. He walks slowly and swears rapidly at his ill-luck in having such a disease. He likes to tell how he feels and gives all the blame for his illness to the weather and his liver.

The chronic bronchitic, like the white corpuscle, is of a very migratory character, migrating from one physician to another and travelling from one end of the earth to the other. It is seldom that you see a patient that has not been treated by at least half a dozen physicians, and he rarely tarries long with any one, but seeks new fields and medicines. In the treatment of this disease we must support our patient, ease cough and pain, promote digestion and appetite, and render substantial aid during an acute attack.

Suppose, now, you are called to see a patient during an acute attack, where there is a swollen condition of the bronchial mucous membrane, with scanty secretion, harassing cough, urgent dyspnœa, and great pain. He sits upright, face livid, pulse weak and rapid, and the respiration shallow and frequent. He begs in Heaven's name for a moment's relief—for just five minutes' rest and sleep. You have all seen him.

Relieve this sufferer now and he is your life-long friend and patron. You must act, and act promptly or all is lost. You are like the man in Texas, who, when he wanted a revolver, wanted it *awful* bad. Just so with you: you want to help the patient, and you want to help him very bad. Suppose you give him a dose of morphine, that would surely ease him, but the probabilities are that it would be permanent, and you could no doubt next day read his obituary notice. Opiates act first on the hemispheres, by dulling their sensibility; this dulling of sensibility extends to the medulla oblongata, which becomes paralyzed and your patient dies, simply because the carbonic acid in the blood fails to irritate this centre of respiration and have it call on the expiratory muscles to assist in throwing off this accumulated carbonic acid poison. If it is, therefore, not safe to give opiates or chloral, what will you give? We must rely on respiratory stimulants, good ones that will not fail us. There are three well-known stimulants that are considered perfectly reliable and potent, viz.: ammonia, strychnia, and belladonna. Of the preparations of ammonia, I prefer the aromatic spirits, or the carbonate. In very serious cases, twenty drops of the aromatic spirits, or ten grains of the carbonate, with twenty drops Squibb's compound spirits of ether, given hourly or every half-hour, affords great relief. If the heart is feeble and rapid, ten drops tincture digitalis should be added once in two hours. If they are nervous and want rest, give bromide of ammonia in one-half or one drachm doses as often as is needed. Rokitanski first found that strychnia was a potent respiratory stimulant. T.

Lauder Brunton, J. Milner Fothergill, and H. C. Wood have long recognized strychnia as a very reliable and rapid stimulant. Fothergill, in severe cases, gives as large as one-tenth grain doses of strychnia every four or five hours, and oftener if necessary. He says desperate cases demand desperate remedies. His favorite prescription for ordinary acute attacks is:

℞. Ammon. carb..... gr. v–x.
Tr. nucis vom. ..... ♏ x.
Tr. scillæ..... ʒ ss.
Infus. serpent..... ʒ j.
M. et sig.—Take every three or four hours.

He adds ten minims tincture digitalis to this mixture if the right ventricle is weak. Belladonna is also a reliable stimulant. It is of special value where there is general want of tone, giving rise to profuse night- and day-sweats. You have all given atropia for night-sweats of phthisis, and you have noticed that the patient, while benefited by the arrest of the sweats, was also greatly benefited in his breathing, breathing less rapidly, taking deeper breaths, and less dyspnœa in walking about. In some cases where it is absolutely impossible to get relief from severe pain in the side by other means than opiates, give atropia, and morphia combined.

I have often given persons suffering from a mild attack of chronic bronchitis the muriate of pilocarpine, in one-tenth to one-twenty-fourth grain doses, every hour or two with great benefit. It has many advantages over ipecac and squills. It is pleasant to take and does not nauseate. It is very prompt in loosening the phlegm, distressed breathing, and annoying cough. It has a decidedly stimulating action on the skin, mucous membranes, heart, and kidneys. Fothergill's father always taught him "never to give squills until the skin is moist and the phlegm loose, and always to give ipecac as long as the skin was hot and phlegm tough." If such is a safe rule, and Fothergill says it is, then we ought to use pilocarpine in all acute stages of disease of the bronchial mucous membrane with great advantage. Inhalations and sprays may often be used with benefit. I have derived the most benefit in my own case from sprays of benzoate of soda, ten to twenty grains to one ounce, followed by prolonged sprays of compound tincture of iodine, ten to thirty or forty drops to one ounce. These used in this manner three times a week generally result in a decided arrest of the profuse secretions and start up a healthy action. Sprays of nitrate of silver, carbolic acid, tannic acid, potassæ chlorate, and zinc sulphate can be used, either in sprays or inhalations, with benefit where the secretion is too profuse. The application of irritating liniments and solutions often scatter and relieve pains like magic. My favorite application is:

℞. Tr. iodini..... ʒ ss.
Ætheris sulphurici..... ʒ ij.
Ol. tiglii..... ʒ ij.
M. et sig.—Apply as directed.

Where the patient is suffering from an acute pain in the side and is feverish and nervous the application of an ointment composed of acidi salicylici, ʒ ij.; morphia sulph., gr. j.; acid. oleici, ʒ j.; adeps, ʒ ss. should be made.—Applied three or four times a day or oftener, until relief is afforded. By this application you avoid giving opium by the stomach, which as a rule destroys the appetite, impairs digestion, and renders the liver inactive by arresting the normal secretions and perverting their healthy action. In cases of chronic bronchitis, where the secretions are scanty and dry, full doses of iodide of ammonia, say of twenty grains, three times a day. By combining the iodide of ammonia with copaiba, cubebs, eucalyptol, or arsenic you produce a decided effect upon the secretions, often arresting them and having a decided curative action. The liver should also be looked after in this climate, and its action should be assisted by an occasional dose of calomel, podophyllin, or elixir wahoo. Quinia in tonic doses, taken for weeks, is of decided benefit. Fellows' compound syrup of hypophosphites, containing, as it does, quinia, with potent nerve-tonics, is a valuable preparation.

Gardner's syrup of hydriodic acid, a non-irritant preparation, containing it is claimed, ninety-nine per cent. of iodine, has a decided curative effect on this disease. I have used it on myself and many patients, and have experienced almost immediate benefit by the arrest of the profuse secretions and cough. The only objection to it is the strong and pronounced metallic taste which invariably follows its prolonged administration, causing loss of appetite and consequent debility.

It should be given in teaspoonful doses three times a day at the commencement, and gradually increased to two or three teaspoonfuls three times a day well diluted in Burgundy wine, porter, or water. In my own case I have had the most prompt and decided benefit from Declât's syrup of nascent phenic acid. It is pleasant to take, and its action has in my hands been very pronounced. It should be given in larger doses than the directions on the bottle. I experienced no benefit until I had taken six drachms three or four times a day. Under the six-drachm doses in one ounce of whiskey or a wineglassful of Hoff's malt, my light, harassing cough was relieved, the exhausting night-sweats ceased, the appetite improved, and sleep was rendered natural. In fact, under ten days' administration of the acid, more rapid and permanent improvement was made than ever before in any previous attacks. Its administration in such large doses should not be persisted in longer than two weeks at a time: then it should be suspended a week or ten days, and commenced and kept up as before, gradually lessening the dose as the disease disappears. I have often prescribed this syrup in obstinate coughs where relief was not obtained by the ordinary remedies, and have had good results.

To obtain good results you must give the syrup of the nascent phenic acid, and you must give it unsparingly. You will get no appreciable results from half a tablespoonful, and may be compelled to give it in two tablespoonful doses. In cases where there is great debility and no appetite, great advantage may be obtained from taking frequent egg-nogs or milk punches. These may often be preceded by a wineglassful of Hoff's fluid malt, etc. When there is great despondency and nervous prostration, decisive advantage may be had from ext. cannabis ind., gr. ½–j.; ext. hyoscyam., gr. ij.; quinia sulph., gr. ij.; taken three or four times a day. The sleeping-room and bed should be warm on arising and retiring, for the reason that the chill from getting into a cold bed and getting up in a cold room gives rise to severe and prolonged coughing. It is also a good idea to take a good alcoholic night-cap before retiring, as it tends to produce sleep and quietude. Patients with chronic bronchitis should not take alcoholics before going out into the cold air, for the reason that alcohol dilates the capillaries in the skin and makes the patient more liable to take cold. If he wants a drink let him take it after he comes into the house. He should wear flannel underclothes the year round, and during the cold and changeable weather should wear a chest-protector.

It is advisable that the patient should take a trip to some equable and mild climate, such as San Antonio, Los Angeles, Aiken, S. C., or New Mexico, during the cold spring and winter months. New Mexico is to be preferred above all as the sanitarium of the world for lung and bronchial disorders. Let he who doubts this statement go and see for himself, and he will return a healthier and better man.

The Creator in his all-wise and all-powerful mind saw that sufferers from chronic bronchitis needed a special habitat, he therefore gave unto the world and the sufferer the United States, because it had New Mexico in it, that one State created for no other purpose than invalids.

Progress of Medical Science.

PAGET'S DISEASE OF THE NIPPLE.—Dr. Duhring reports in the July number of the *American Journal of the Medical Sciences* two cases of Paget's disease of the nipple, which he holds is not an eczema, but a peculiar disease with a malignant tendency. It must be distinguished from eczema, which it resembles, and from ordinary cancer, which it is altogether unlike in its earlier stages. It seems to occupy a ground having the characters of both diseases. The report is interesting as showing the natural history of the affection. This is peculiar. The course of the process is emphatically chronic. In both instances, moreover, the progress of the disease was insidious as well as slow. Nothing of a malignant nature was suspected until after the lapse of five and ten years respectively. The itching, which eventually became such a marked symptom, was in both cases insignificant until the affection had existed several years. It may be said not to have manifested itself until after the process had been well established. In this respect the disease differs decidedly from eczema, where itching is one of the first signs noted. The circumscribed, sharply defined outline of the lesion, and the slightly elevated border, are also symptoms which do not obtain in eczema. The brilliant color of the lesion is striking, and is more marked than in eczema. The absence of the "eczematous surface," characterized by appreciable discharge or by vesicles, pustules, or puncta, coming and going from time to time, and the absence of exacerbations, so usual in eczema, may also be referred to. A point to which attention may also be directed is the infiltration, which is firm or even hard, but is not deep-seated. It is rather superficial. In eczema, on the other hand, it is soft. The pains coming on later in the course of the disease, and the indurated, lumpy, or knotted lesions within the gland structure, of course point strongly to the malignant or cancerous nature of the disease, the existence of which cannot be doubted.

CHAUFFAGE OF THE GENITAL ORGANS IN VENEREAL DISEASE.—Following in the line of Chauveau's experiments in weakening virus by heat, Dr. Aubert suggests that the virus deposited upon the skin or in the tissues may be modified by raising the temperature of the part to 108° or 109°. He remarks upon the cure of paronychia sometimes obtained by immersing the finger in hot water, and suggests that we might avert by this means the consequences of snake-bite, dissection wounds, or a suspicious coitus. M. Aubert has made a few experiments in this direction with chancroidal pus. He exposed a part of this pus for twelve hours to a temperature of about 109°, while the rest was preserved at the ordinary temperature. Inoculations with the warmed pus were without result, but a chancroid followed the introduction of the other. He therefore concluded that chauffage destroyed, or at least rendered innocuous the chancroidal virus. The author has as yet made no experiments with the virus of syphilis or gonorrhœa. He suggests that the high temperature is the explanation of the subsidence of syphilitic manifestations during the course of typhoid fever or other febrile disease. He further asks if the fact that chancroid is not developed in the interior of the body and never passes beyond the superficial lymphatic glands, may not be explained by the destruction of the virus by the heat of the deeper tissues. —*Journal de Médecine de Paris*, June 2, 1883.

HYDATID CYST IN THE BICEPS MUSCLE.—The following case, only three similar ones having been previously recorded, is reported by Dr. Picqué (*Journal de Médecine de Paris*, May 26, 1883): A woman had noticed a tumor on the anterior part of her left arm for about ten years, but it was of small size and never occasioned any pain or inconvenience. Suddenly, about two months before the patient came under observation, the tumor began to grow rapidly until it had attained the size of a child's head. It was elastic, fluctuating, of regular contour, movable upon the subjacent tissues, and not adherent to the integument. The humerus was unaffected, the radial pulse was normal, and sensibility was but little changed. There was no pulsation in the tumor, nor any other sign of aneurism. The axillary glands were not enlarged. The diagnosis lay between a cold abscess, a hæmatoma, or a hydatid cyst. Upon puncture of the tumor a quantity of pus was evacuated in which were found the characteristic hooks. The treatment consisted in a free incision, followed by scraping the walls of the cyst with a sharp spoon, and was successful in its results.

PERIODICITY OF CERTAIN SYMPTOMS IN HEPATIC DISEASE.—Dr. J. Cyr (*Journal de Médecine de Paris*, June 2, 1883) says that although various writers have remarked upon the periodicity of some particular important symptom (pain, jaundice, vomiting, etc.), in disease of the liver, the observations have been isolated and so few as to attract little notice. He has collected upward of forty cases, occurring in his own practice, in which some symptom, usually pain, presented a more or less marked intermittency; often the same symptom returned with most striking regularity. This periodicity was peculiar, in that it was in most cases uninfluenced by quinine, but disappeared under treatment directed to the hepatic disorder. From these observations he draws the conclusion that the periodical element in hepatic symptoms has a greater importance than has hitherto been attached to it. And he states that often in doubtful cases, as has occurred in his own experience, the determination of the fact of intermission in one or more of the symptoms may be of great value as an aid to diagnosis.

CONTUSIONS OF THE BRAIN AND SPINAL CORD.—The late lamented Dr. John A. Lidell, in an elaborate paper on this subject in the *American Journal of the Medical Sciences*, July, 1883, discusses the clinical history, diagnosis, prognosis, and treatment of this large and very important class of injuries. While much is said in our text-books on the subject of cerebral concussion—of its dangers and of its importance—but small if any mention is made of the contusions of the brain which so very often complicate the concussions, and impart to them whatever of gravity, be it much or little, that they may chance to possess. And still less mention is made of the contusions of the spinal cord. No wonder, then, that bruises of the brain-structure and of the spinal-cord substance occur much more frequently than is generally supposed, that the relationship which exists between these injuries and concussions is not well understood, and that the bruises of these organs often escape even all suspicion during life. That slight or even moderate concussions of the brain sometimes, perhaps not unfrequently, occur without being complicated with contusions of the brain, the author does not doubt. Contusion of the brain is, therefore, he believes, not synonymous with concussion of the brain; but, at the same time, all the evidence now collected tends to prove that the severe instances of cerebral concussion are always complicated with cerebral contusion. Concussion of the brain, however, derives its chief importance from the fact that it is very often associated with contusion of the brain; and, in examining a case of cerebral concussion, the question of most importance for the surgeon to decide is whether or not cerebral contusion is also present. These are points of doctrine which practically have much interest for patients as well as practitioners, because of the influence they are likely to exert in the direction of procuring a correct diagnosis, and, consequently, a wise treatment. For in the disorders of no other parts of the body is it more true that an accurate diagnosis begets a wise plan of treatment than in those of the brain and spinal cord.

CHANCRE OF THE TONSIL.—The following case is reported by Dr. Hue in *La France Médicale* of May 31, 1883. A man, thirty-seven years of age, of unusually good health, had complained for about six weeks before admission to hospital of slight pain upon the right side of the throat in swallowing. This pain gradually increased in intensity, and at the same time a swelling appeared in the right submaxillary region. He did not trouble himself much about it, but continued to work as usual; soon, however, he began to have poor nights, he was troubled with headache, had fever, a general feeling of malaise, and sometimes slight vertigo. Upon the right tonsil was seen an ulcer about the size of a ten-cent piece, with sharp-cut edges, marked by a red border with a yellowish-gray centre of irregular surface, emitting a sanious discharge. The tonsil was enlarged, and indurated about the base of the ulcer. There was a characteristic agglomeration of the maxillary glands upon this side, of about the size of a pigeon's egg, but varying according to the conditions of repose and external warmth. The cephalalgia was more violent during the night than during the day, and occupied only the right side of the head. The diagnosis wavered for a time between epithelioma and chancre, but was finally settled upon the latter. Appropriate treatment was pursued with some benefit, but without success in preventing the appearance of secondary symptoms.

SUDDEN DEATH AT THE BEGINNING OF CHLOROFORM INHALATION.—Dr. Janovitsch Tschainsky relates in *Medizinski Westnik*, Nos. 12 and 13, 1883, the case of a peasant, twenty-eight years of age, upon whom he was about to operate for the removal of a lupoid growth from the under lip. Hardly had the patient taken two whiffs of chloroform when respiration ceased and he was dead. The necropsy revealed fatty degeneration of the wall of the right ventricle, while that of the left appeared to be normal. The reporter attributed the death to psychic causes, the dread of the operation. He relates several similar cases, among which was that of Cazenave. In this case the surgeon desired to operate upon a very nervous patient without chloroform, and in order to deceive him held a bag of pure air before his mouth; he breathed four times and died. Desault, being about to cut for stone, drew his finger-nail across the perineum to indicate the line of incision. The patient in his alarm gave a shriek and died.

THE FEEBLE INFLUENCE OF IODINE OVER MALARIAL FEVERS.—There have recently appeared numerous reports from medical men in various parts of the world, reciting the virtues of iodine in the treatment of malarial fevers. It is true that these do not all agree as to the exact degree of reliance that may be placed on this agent as an antiperiodic. There are, however, those who claim for it an efficacy not less than that of Peruvian bark, as far as the immediate control of the attack is concerned, and even greater than bark in preventing its recurrence. It must be confessed, however, that the results reported by various observers do not entirely agree. Here we find an assertion that in chronic malarial poisoning iodine does its work most effectually; there, that its value is nil; in another article we find that it is recommended to render permanent the cure that quinine has begun; in still another, that it is given in combination with quinine, arsenic, etc. On the other hand, we find that by some, antiperiodic properties are denied to iodine. Attracted by the testimony in its favor, and with the desire to definitely ascertain the powers of iodine as an anti-malarial remedy, in view of the ease of its administration and of its comparatively small commercial value, Drs. I. E. Atkinson and Hiram Woods availed themselves of the opportunity of treating malarial fevers afforded at Bayview Asylum, Baltimore, during the late summer and autumn of the past year (1882), and they record the results in the July number of the *American Journal of the Medical Sciences*. Their experience leads them to draw the following deductions as to the use of iodine in acute malarial poisoning: 1. In intermittent fever it has some feeble influence in controlling the paroxysms. 2. It takes usually from three to eight days to exercise this influence. 3. In cures effected there is great danger of a relapse; certainly as great as with Peruvian bark. 4. It is certain to add to any existing diarrhœa or nausea, and is liable to cause each if they do not already exist. 5. In remittents, its effect, if any, is seen in a slow and gradual reduction of temperature, and this reduction is liable to sudden interruptions. 6. In both forms of malarial fever it is infinitely inferior to either cinchonidia or quinine: certainly as regards the immediate control of the fever, and as far as we are able to judge, as regards relapses also. 7. From an economic point of view, the slowness and uncertainty of its action makes its use in hospital practice fully as expensive as Peruvian bark. 8. There seems to be ground to believe that it can cause albuminuria. 9. In the large majority of cases of ordinary acute malarial poisoning it has no influence whatever.

CONGENITAL CARDIAC CYANOSIS.—The following case was reported to the Société Anatomique de Paris by Dr. Toupet (*Le Progrès Médical*, June 9, 1883). The patient, seven years of age, had been the subject since birth of cyanosis. The face and extremities were blue, the eyes prominent, and the nails enormously hypertrophied. The temperature was 96.5°, the respiration rapid and labored. The heart was greatly enlarged, and a loud blowing murmur with the first sound was audible at the level of the third costal cartilage near the left border of the sternum. During the four years that it remained under observation the child passed safely through measles and whooping-cough, but finally died in an attack of pulmonary congestion. Upon opening the chest the heart appeared to lie nearly in the median line, owing to the greater size of the right ventricle. The right auricle was of normal size and well formed, while the left was merely rudimentary. The aorta was greatly dilated up to the origin of the left subclavian artery, where it resumed its normal dimensions. The pulmonary artery was seen alongside of the aorta and only about one-fourth of its size. The walls of the right ventricle were very thick, the tricuspid valve seemed healthy. The infundibulum was separated from the right ventricular cavity by a sort of partition pierced by an opening the size of a small goose-quill. The mitral valve was normal. The interventricular septum presented a solution of continuity at its upper part large enough to admit of the introduction of a finger. The aorta arose exactly at the septum, opening into both ventricles. The valves in the inter-auricular septum closing the canal of Botal were not adherent, and were pierced also by two openings the size of a crow-quill. The lungs were congested but presented no trace of tubercles.

ENLARGEMENT OF THE BRONCHIAL GLANDS AS A CAUSE OF IRRITATION OF THE PNEUMOGASTRIC NERVE.—Dr. Edward T. Bruen, in the July number of the *American Journal of the Medical Sciences*, discusses the effects of enlargement of the bronchial glands in producing reflex irritation of the pneumogastric nerve. The difficulty in the diagnosis of such cases consists in separating them from cases of early phthisis. One must rely mainly on the absence of the combination of physical signs required to render the presence of incipient phthisis certain. These are impaired percussion resonance, some form of bronchial breathing, possibly fine moist râles and increased vocal resonance. The last two physical signs are not present in cases of bronchial enlargement. Pain in the back and disturbance of the respiratory rhythm are not often present in phthisis. Hysteria, uterine, or spinal disorder may be eliminated by careful examination. Finally, the beneficial results of treatment may be appealed to to sustain the theory of the etiology of the cases.

LESIONS OF PERIPHERAL NERVE-TRUNKS.—In the July number of the *American Journal of the Medical Sciences*, Dr. Weir Mitchell publishes an interesting paper on nerve-lesions, illustrated by five recent cases, which he has very carefully noted and studied. Nothing which we know as yet explains all the clinical phenomena of these interesting cases, and, in all probability, some of the variations in the symptoms observed are to be attributed to differences in the character of the disorder affecting the nerve-trunks, or even to the nature of the causes originating the active pathological condition. In one of the cases, among the various points of interest none exceeds in value the abrupt extension of the areas of lessened sensation which was seen after section of the median and radial nerves. This was not to be accounted for upon any knowledge which we now have of the peripheral distribution of nerves, since in one case the dysæsthesia spread far beyond the region tributary to the nerve stretched or cut; and, in the other, in some directions did not cover the whole regions usually affected after radial nerve-sections. Generally speaking, the symptom is to be considered as one of the many forms of shock. A sudden injury to a nerve already morbidly altered gives rise to an inhibition of function in certain closely related centres. The disturbance might be in the direction of motor or of sensory inhibition, and both forms are among the rarer phenomena of nerve-wounds from rifle-balls. The fact itself is less surprising than its permanence, nor is it easy to comprehend the precise nature of an influence which may act on such varied functions, and act so persistently. In a case of section of the infra-orbital nerve for facial neuralgia, the remarkable feature was the fall of temperature, a symptom exceptionally rare in any form of neuritis, whether of internal or traumatic origin.

EARLY CEREBRAL SYMPTOMS OF TUBERCULOSIS IN THE ADULT.—Dr. Daremburg relates at some length in the *Archives Générales de Médecine* for June, 1883, the histories of four cases of tuberculosis in which the actual onset of the disease was preceded for several years by a very noticeable change in disposition. The patients, who were of a lively and amiable disposition, attentive to their friends and families, and interested in all that was going on about them, became morose and sullen, neglected their business and displayed an unwonted irritability and peevishness. No cause could be discovered to account for this change of character. In the course of a few years the symptoms of tuberculosis manifested themselves, and the patients eventually all died of tubercular brain affections. From a study of these cases the author concludes: That when in an adult there is observed a marked change in character, consisting especially in a general apathy and a notable indisposition for study or work, for which no cause can be determined, there is reason to suspect the possibility in the future of the development of tuberculosis. The prognosis is yet more grave if there be an hereditary predisposition to this disease. And further, when once the existence of tuberculosis becomes established a fatal termination from tubercular meningitis may be looked for.

PASSAGE OF A LUMBRICOID WORM THROUGH THE EAR.—Dr. Paul Dagand writes to the *Journal de Médecine et de Chirurgie Pratique* for June, 1883, concerning an epidemic of measles occurring during the first quarter of the present year. In every case he observed a peculiar complication in the presence of a large number of lumbricoids, which were discharged from both the mouth and the rectum, sometimes to the number of fifty or more. He was called in haste, one day, to see a child suffering from measles and secondary pneumonia, from whose ear the father said a worm was coming. The child had complained for two day of violent earache, and Dr. Dagand, upon his arrival, discovered a piece of a worm, about a line in diameter, in the external auditory canal. A piece about two inches in length had already been torn away, and the attempt to remove the rest was successful. The entire length of the lumbricoid was about five inches. The worm had apparently passed up through the Eustachian tube and perforated the drum. There was an otorrhœa for some days, which gradually disappeared. When seen two weeks later the child was well with but slight impairment of hearing.

RHEUMATISMAL CONJUNCTIVITIS.—Dr. Maurice Perrin, in a previous communication to the Academy of Medicine of Paris, related a number of facts tending to prove the existence of a form of conjunctivitis due to rheumatism. This resembles, especially in the rapidity of its development and the gravity of its symptoms, gonorrhœal ophthalmia. He has now collected (*Journal de Médecine et de Chirurgie Pratique*, June, 1883) a number of cases of different observers, which would seem to establish without doubt the existence of this variety of conjunctivitis, in which the integrity of the cornea is seriously endangered in spite of the most skilful treatment. This affection is sure to be confounded with gonorrhœal ophthalmia whenever there is any urethral discharge, even though the latter is not specific. The rheumatismal conjunctivitis is not always purulent, and may, in a less degree and without changing its nature, affect the form of simple catarrhal conjunctivitis. To the treatment by nitrate of silver in mitigated stick or in solution, it is well to add frequent lotions or spraying of the eye with alcohol and water of the strength of one part to four.

EXPERIMENTAL KERATITIS AND STRICKER'S THEORY OF INFLAMMATION.—Dr. J. L. Minor, of New York, in a brief paper in the July issue of the *American Journal of the Medical Sciences*, claims the establishment of the immigration theory; because the pus-cells are similar in appearance to the white blood-corpuscles; they can be traced from the corneal periphery to the point of irritation; and having also gained access to the corneal tissue through the eschar, they are most abundant immediately around this centre, where we can still recognize dead, but intact, corneal corpuscles. The corneal corpuscles show signs of proliferation some time after the cell immigration has set in. And this proliferation gives rise, not to pus-cells, but to new corneal corpuscles, and they are strictly limited to the zone surrounding the dead corneal corpuscles; whereas leucocytes, or pus-cells, in abundance, can be found in various parts of the cornea, at a distance from this point.

ALIMENTATION OF INFANTS AFFECTED WITH THRUSH.—When new-born children, affected with thrush, refuse to take the breast or the bottle, Dr. Wiederhofer (*Journal de Médecine de Bordeaux*, June 10, 1883) advises the pouring of milk by means of a funnel through the nasal fossæ. This mode of alimentation is not difficult. When the milk enters the pharynx it provokes reflex movements of deglutition and is propelled into the stomach. The author has been enabled by this means to nourish infants for three and four weeks in succession. The same procedure is useful in children born before term, in whom there are no spontaneous movements of deglutition.

SALT WATER EXCURSIONS IN THE TREATMENT OF ASTHMA.—Professor Münter, upon the strength of his personal experience, recommends a daily excursion of three or four hours' duration upon the water as affording a remedy of the greatest value in certain cases of asthma. He regards it as very useful also in anæmia, and remarks upon the longevity and excellent health of seafaring people as confirmatory of his experience.—*St. Petersburger Med. Wochenschr.*, June 9, 1883.

A DAILY EDITION of the *Peoria Medical Monthly* was published by its enterprising editor during the session of the Illinois State Medical Society.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, August 4, 1883.

THE MEETING OF THE BRITISH MEDICAL ASSOCIATION AND OUR CABLED REPORT.

IN the present issue we have the pleasure of presenting by cable despatch the report of the meeting of the British Medical Association, held in Liverpool, England, during the past week. In connection with this report we are also enabled to publish in full the admirable address on surgery, delivered before the Association on Wednesday, by Mr. Reginald Harrison, of Liverpool. We take a special pride in so doing, as we are thus enabled to bring within the reach of our readers, in the shortest possible time, the doings of an Association in which the American profession is very much interested.

To such as read the report, and the able address to which reference has already been made, we believe it will be quite apparent that the end justifies the means. At least, our readers are enabled to secure very much in advance of the arrival of the English journals the publication of the proceedings of this model Medical Association, and learn with the least possible delay what business it transacted during the past few days.

It may not be unpardonable, in connection with the cabled report itself, to allude with satisfaction to some of the possibilities of medical journalism in this country. We have demonstrated, we believe, the fact that a scientific medical meeting in Great Britain can be accurately reported and published in New York within a few hours after the final adjournment has been announced. This too, we are assured, is the first time in the annals of telegraphy that the report of a medical meeting has been cabled. But ordinary telegraphing of medical meetings is now so common, and even daily editions of medical journals so frequent, that we have a becoming pride in believing that our readers are prepared for any novelty which may combine enterprise with utility.

As will be seen, the meeting was largely attended and considerable interest was manifested in its proceedings. The addresses before the general sessions, as well as those before the sections, were duly appreciated as creditable productions. Mr. Harrison's address speaks for itself. The address of Dr. Creighton on Pathology, as a candid exposition of the present status of a special department of our science, was fully representative as to learning of author and scope of subject. But we shall have an opportunity of presenting this address in full in a future issue.

Of course many topics, having more or less reference to the government of the Association, were discussed in the meetings of the Council and general session, but those having reference to state medicine and professional relations will be of more or less interest to the medical men on this side of the Atlantic. Ethical questions bother our English cousins as they do ourselves. The same problems regarding proper ethical associations present themselves there as here, and the same indefiniteness of conclusion and hesitancy of positive and decided action manifest themselves. But these questions always gain in importance by discussion, and the general medical mind is gradually becoming prepared for the adoption of broad, liberal, and consistent principles.

The reports of the Sections, which will be presented in full to our readers in due time, will show how much of useful work was done during the afternoon sessions, not only in the number and value of papers presented, but in the earnest and instructive discussions which they called forth. The importance of some of these is foreshadowed in our cable despatches. How different indeed from similar exhibits in the sections of the American Medical Association.

The Meeting of the British Medical Association, to use the words of our correspondent, "was admitted to be one of the most successful yet held." This could hardly have been otherwise, considering the extensive preparations made to that end, the admirable organization of the Association, and its extensive working capabilities. It is safe to say that no medical or scientific body equals it in these respects. There are peculiar facilities offered to such an end which do not exist elsewhere than in Great Britain. Take, for instance, the American Medical Association as the corresponding medical organization in this country. By comparison with that in Great Britain it suffers in every way. In the latter country the profession is compactly associated in a comparatively limited area. Its main interest centres in London. There are its leading medical journals and its leading medical influences. This medical centre is within easy range of every part of the kingdom. The attendance of the best men can always be secured without much sacrifice of individual time, and with comparatively small personal inconvenience. In this country the National Association has a membership necessarily widely scattered, has, so to speak, an ever-changing and floating constituency, and there is little, if any, stability to its organization. But this is more by way of hoping for what may be than what is.

Socially our English brethren, on occasions like the present, generally manage to make the most of surroundings. There is one feature in their entertainments, they are not pecuniarily burdensome to the local organizations, as extra expenses are divided among individual members. This is also a matter worthy of more extended imitation among those of our medical brethren so given to entertain and to be entertained. There does not seem to be any lack of enjoyment on these occasions, nor of sumptuousness in the character of the banquets, due to the fact that each individual is willing to discharge his own indebtedness. The gathering at

the soirée on Wednesday evening was unusually large, numbering fully three thousand guests, and including a large proportion of ladies.

It is gratifying to note the national interchange of courtesies at the annual banquet on Thursday evening. The honored president of the American Medical Association, Dr. Flint, worthily represented his countrymen in his admirable toast to the British Medical Association, while Mr. Ernest Hart paid, in eloquent terms, a fitting tribute to the distinguished guests who graced the occasion. Nothing could be in better keeping with the spirit of fraternal professional feeling existing between the two countries, nor better represent the cordial reciprocity of good will and generous emulation in the higher professional pursuits. Each year the opposite shores are being brought nearer together, and even now we feel pulse-throbs along the wire.

CONTAGION AND QUARANTINE.

THE situation in regard to the yellow fever is considered quite satisfactory, notwithstanding the fact that the disease is "knocking at the door" of many of the Northern as well as Southern ports. The action taken by the New Orleans authorities in requesting the Governor to order all infected vessels out of the Mississippi River, and to allow no more such vessels to enter its mouth or come up to the quarantine station, is regarded as one of the most important events that has occurred in connection with the efforts of the Government in preventing the yellow fever's introduction into that port. Governor McEnery at once telegraphed to the Surgeon-General of the Marine Hospital Service to ascertain whether vessels turned out of the Mississippi quarantine would be received at the Ship Island Refuge Station, and was promptly informed that all infected vessels would be received there. This action at once obviates all necessity for the continuance of the inspection service of the "Sanitary Council of the Mississippi Valley" at Memphis, Vicksburg, etc., which has created some dissatisfaction amongst steamboat lines assessed by the "Sanitary Council" to keep up the inspection.

Medical officers have been stationed at London and Liverpool, England, for the purpose of informing the Government as to the condition of said ports, and to make sanitary inspections of all vessels sailing to United States ports, notifying the Government by cable whenever an infected or suspicious vessel departs for the United States. Dr. Robert Mainegra, of New Orleans, has been appointed Sanitary Inspector for the port of Vera Cruz, Mexico, and is now on his way to that place to perform similar duty. Pending his arrival, the consul at Vera Cruz has been requested to cable the departure of all vessels from that port. Dr. Burgess has been on duty at Havana as Sanitary Inspector since July 1st. The consuls at other ports where infectious diseases prevail, as well as those mentioned above, have been directed by the Secretary of State, at the request of the Secretary of the Treasury, to inform all out-going ships to put in at Ship Island, or Sapelo Refuge Station, before proceeding to their port of destination, for the purpose of being inspected, thereby saving detention, as they will be ordered there by the municipal authorities if they attempt to enter any Southern port.

The Secretary of the Treasury decided a few days ago that the quarantine law of April 29, 1878, is again in force, the law repealing it having been a temporary law, which expired by limitation on June 2d last. This decision is of the utmost importance, as it relieves the apprehension that has been felt regarding the powers of the Government in controlling quarantine. The law as it now stands, with the power given at the last session of Congress "to maintain quarantine [stations] at points of danger," gives us the best and most powerful quarantine law we have ever had. Acting under this decision, the Secretary directed the Collector of Customs at Boston to enforce the law and regulations against the British steamer Bavarian with a cargo of Egyptian rags, which was expected to arrive at that port. The regulations referred to are as follows:

"Until further orders, no vessel from any port of the Black Sea, or the Sea of Azof, conveying any rags, furs, skins, hair, feathers, boxed or baled clothing or bedding, or any similar articles liable to convey infection, nor any vessel from any port of the Mediterranean or Red Seas having on board such articles coming from Southern Russia, shall enter any port of the United States until such articles shall have been removed from the vessel to open lighters, or to some isolated locality, and the vessel disinfected and thoroughly ventilated; and the suspected articles shall be disinfected, either by chemical agents and exposure to free currents of air, or by burning, as shall be determined in each case by the Surgeon-General of the Marine Hospital service.

"The certificate of the State or municipal quarantine officer of health may be accepted as satisfactory evidence of compliance with these regulations on the part of the vessel."

A sanitary conference was held at Fortress Monroe on July 28th, to consider the question of establishing a national quarantine station near the Capes; there were present Surgeon-General Hamilton, U. S. Marine Hospital Service; Dr. Smith Townsend, President of the Washington Board of Health; Dr. George H. Benson, Health Commissioner of Baltimore; Dr. J. G. Cabell, President of the Board of Health of Richmond; the Health Officer of Norfolk and Newport News; Hon. H. Libby, Member of Congress; Colonel Loder, Commander Fort Monroe; Captain Evans, U.S.N. Lighthouse Inspector; General Grover, Member Norfolk City Council; the Mayors of Newport News, Portsmouth, and Norfolk, and many other prominent men of the various towns in the vicinity. After a full discussion of the subject it was decided to establish a National Quarantine Station at Fisherman's Island, some twenty miles from Norfolk, near Cape Charles; and pilots were instructed to take all vessels from foreign ports there for inspection. By the establishment of this station all cities on the Chesapeake are protected from the approach of infected vessels. Heretofore Baltimore has permitted such vessels to come up to her quarantine station and take care of them there, but the fear of panic has decided the Health Commissioner to join in urging a national quarantine station between the Capes where all infected vessels can be cared for without endanger

ing Baltimore. The Revenue vessels and hospital steamer John M. Woodworth will also be on guard at the Capes to prevent vessels passing up the bay until inspected.

A NEW THEORY OF THE NATURE OF BRIGHT'S DISEASE.

PROFESSOR SEMNOLA, of Naples, has for some years been studying the subject of Bright's disease with the view of demonstrating the humoralistic origin of the disease. At the International Congress in London, two years ago, he propounded the view that nephritis is consecutive to an albuminous dyscrasia—a view which Gubler had already suggested before him. Semnola's theory was received with respect, but gained no adherents. Recently this industrious student came all the way to Paris and laid before the Académie de Médecine the results of his further investigations. In brief, he has injected or transfused into the blood of various animals different kinds of albumen, and he finds that the effect is first to produce albuminuria, then nephritis, the results varying with the kind of albumen. He also states that in Bright's disease there is a general transudation of albumen, this substance being found in the bile (where it does not exist in health), in saliva, and various other secretions and fluids. The cause of renal albuminuria, therefore, is to be looked for in the blood. Here the normal serum-albumen, which does not easily transude, becomes changed and passes into the urine. In so doing it sets up the different inflammatory and degenerative processes which characterize the kidneys in Bright's disease. Professor Semnola found in his experiments that the form of albumen which is most apt to transude and cause irritative trouble is the ordinary egg-albumen. This stands at one end of the list, serum-albumen at the other.

Professor Semnola's exposition of his views was received with great applause by the Parisian academicians. No discussion, however, followed. It was not stated whether there were any practical deductions to be made from this dyscrasic hypothesis. The inference is, however, that egg-albumen should be forbidden and serum-albumen prescribed as an article of diet.

LUPUS AND TUBERCULOSIS.

DR. J. DOUTRELEPONT, of Bonn, has examined seven cases of lupus with the view of determining the presence of the bacilli tuberculosis. In the diseased tissue of all of these cases the organisms were found, though in varying amount. The investigator concludes, therefore, upon this and certain clinical grounds, that lupus is a tuberculosis.

Dr. Demme has also investigated this subject and has found the tubercle bacilli in the nodules of lupus nodosus and in lupus serpiginosus. He also argues therefrom the identity of the two diseases. On the other hand, a writer, presumably Spina, in the *Wiener Medizinische Zeitung*, takes an entirely different view and asserts that the presence of these bacilli simply shows that they are not pathognomonic of tuberculosis, or that, though different bacilli, they take the same staining. The writer in question arrays all the clinical and pathological evidence possible against the view of the identity of the two diseases.

HOW TO SLEEP ON A RAILROAD TRAIN.

MANY weary persons have tried to solve this problem, and have tossed about for hours in restless disappointment.

Dr. Outten, a German physician, has applied the laws of physiology to the matter and announces (*Allg. Central-Zeitung*) a satisfactory solution of it all. If a person lies down with his feet toward the engine, the movement of the train tends to draw the blood from the brain to the feet, cerebral anæmia is produced, then sleep. If, on the other hand, the person lies with his head nearer the locomotive (as is the custom in Germany), the movement of the train produces a cerebral hyperæmia incompatible with sweet repose. Dr. Outten has verified his view with many experiments.

Dr. O.'s directions are hardly needed in America, where the berths of sleeping-cars are generally made up so that the position is as indicated by physiology and our German *confrère*. In this connection, however, we would say that many persons are unaware of the fact that additional comfort and better sleep in travelling can often be obtained by judiciously using the bromides.

THE YELLOW FEVER AND ITS CONTROVERSIES.

THERE has for some time been much lack of harmony among the sanitarians of the Mississippi Valley. The discord has been intensified since the National Board of Health gave up control of quarantine. The Sanitary Council of the Mississippi Valley, the Louisiana State Board of Health, the United States Marine Hospital Service, and the New Orleans City Board of Health have been the active participators in the sanitary dissensions. The quarrel, though unfortunate, has perhaps had one good result: it has forced the authorities to be extremely alert against the yellow fever, lest the reproach of allowing that disease to get into our ports be made against them.

It appears, however, that matters have become a little too personal and acrimonious. On July 20th Governor McEnery, of Louisiana, issued the following proclamation:

"In accordance with the preamble and resolution of the Louisiana State Board of Health, adopted July 12, 1883, a copy of which is hereto annexed, and in consideration of the imminent danger that the city of New Orleans, the State of Louisiana, and the Mississippi Valley are now in from the arrival at quarantine of infected vessels, any unnecessary intercourse between the Mississippi quarantine station and other quarantine stations and the city of New Orleans is hereby strictly prohibited, and any permission for that purpose heretofore granted is hereby revoked. The laws of Louisiana and the rules and regulations of the Board of Health must be rigidly enforced and obeyed in this and all respects while danger continues. Intercourse between the quarantine stations and New Orleans must be under the exclusive control of the Board of Health. I invoke the vigilance and co-operation of all good citizens during this season of threatened calamity. This order will be communicated by the Board of Health to all persons concerned therein."

Shortly after this, the Louisiana State Board of Health held a meeting and unanimously passed the following resolutions:

Whereas, Dr. J. H. Rauch, the Secretary of the Board of Health of the State of Illinois, has recently visited New Orleans and directly interfered and tampered with the health operations of the State Board of Health of Louisiana; and

Whereas, Since the dissolution of the National Board of Health there has been an effort made by illegal bodies to assume to perform its pernicious functions and mischievous tendencies; be it

Resolved, That the President of this Board be and he is hereby requested to respectfully suggest to his Excellency the Governor of Louisiana to confer with his Excellency the Governor of Illinois on the propriety of confining Dr. J. H. Rauch to health operations within his own State, and to instruct him to cease his designing efforts to impair public confidence in the State Board of Health of Louisiana.

This is a rather severe snub to the energetic Illinois official; it at least does the injustice of not saying that he is Secretary of the Sanitary Council of the Mississippi Valley; and evinces, we fear, the need of some moral sanitation in the great Southwest.

This Sanitary Council has undertaken to continue part of the work of the National Board of Health, acting in antagonism to the Marine Hospital Service. It has, however, been beaten in the various measures it has adopted, and has had to give up its steam-launch.

News of the Week.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—The first two numbers of this Weekly have come to hand. While fully appreciating the difficulties under which the editor, Dr. N. S. Davis, has labored in starting a new medical journal, we confess to some disappointment at the result. The first number contains the address of the President of the Association, which has been published in full by several journals, lay and medical, two months ago. This should have debarred it, according to the rules which governed the publication of the Transactions, from appearance in the official journal, and would appear to establish the precedent that those papers which, in violation of the rules, have already been published elsewhere, will ultimately find a place in the official Transactions. Both numbers are largely made up of the doings of the Association. There are also departments for progress of medical science, news, reviews, correspondence and editorials. We bespeak for this enterprising periodical all the success which it may deserve, and welcome the veteran Editor to the higher walks of medical journalism.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The next annual meeting will be held at Lake George, August 29, 30, and 31, 1883. Dr. R. W. Taylor, of New York, President, and Dr. Arthur Van Harlingen, of Philadelphia, Secretary.

DR. H. N. HEINEMAN, of this city, has been elected Professor of the Principles and Practice of Medicine at the Woman's Medical College of the New York Infirmary.

MOUNT SINAI HOSPITAL.—Professors A. L. Loomis and A. Jacobi have resigned as visiting physicians to this institution, and have been made consulting.

THE INDIANA STATE BOARD OF HEALTH is a failure, according to the Fort Wayne *Journal of Medical Sciences*. The provisions of the law are not so much for the benefit of the public health as of the politicians. Board of Health failures are becoming unpleasantly numerous.

PASTEUR OFF FOR EGYPT.—M. Pasteur having offered to organize a mission for investigating the cholera in Egypt, the Hygiene Commission has endorsed the scheme. The mission will consist of M. Roux and M. Thuillier, of M. Pasteur's laboratory, M. Strauss of the Faculty of Medicine, and M. Nolaco. M. Pasteur has written to Lord Granville to solicit the grant of facilities to the mission in Egypt.

THE OPHTHALMOLOGICAL SOCIETY OF GREAT BRITAIN held its third annual meeting on July 6th, electing Mr. Jonathan Hutchinson President.

THE CHOLERA continues to be confined to Egypt, being particularly severe at Cairo. Between three hundred and four hundred deaths are reported daily. It is believed that many more deaths from cholera occur in Alexandria than are reported. The English, who reject quarantine as interfering needlessly with commerce, have undertaken their system of inspecting incoming vessels and disinfecting those having disease on board. It is reported that cholera exists in Rio Janeiro. Precautions against the importation of Egyptian rags are being taken by the authorities in American ports.

THE LOUISVILLE MEDICAL NEWS.—Dr. L. S. McMurtry has retired from the *News*, and is succeeded by Dr. H. A. Cottell, formerly one of its editors.

DR. FRANCIS DELAFIELD has been elected full Professor of Principles and Practice of Medicine, College of Physicians and Surgeons, New York.

A SANITARY CONVENTION.—Our Western brethren revel in sanitary conventions. One is to be held at Muskegon, Michigan, under the auspices of the State Board of Health, on Thursday and Friday, August 23 and 24, 1883. The objects are the presentation of facts, the comparison of views, and the discussion of methods relating to the prevention of sickness.

THE DEATH OF DR. GEO. H. FISHER.—Dr. Fisher, son of Dr. George J. Fisher, of Sing Sing, N. Y., died suddenly, July 23d, at Baltimore, Md., aged twenty-nine years. After receiving his preparatory education at the military schools of Dr. Holbrook and the Mt. Pleasant Academy, he was graduated at the Medical Department of Columbia College in 1878. Dr. Fisher practised his profession for some time in connection with his father, and afterward at Round Hill, Conn. On the 22d of February last he was married to Miss Florence Jobbins, of Brooklyn, and in the following April went to Baltimore, Md., in the interest of a New York mercantile house. He remained in Baltimore until the time of his death. Dr. Fisher retired to his room in usual good health on the evening of July 23d, and at an early hour of the morning was found dead in his bed, his spirit having passed away apparently without a struggle. The profession will deeply sympathize with the distinguished father of the deceased in his deep affliction.

THE LONDON HOSPITAL SCHOOL.—Mr. Jonathan Hutchinson has resigned his position as senior surgeon, and has been appointed Emeritus Professor of Surgery. Dr. Tidy has resigned his position as Lecturer on Chemistry.

THE UNIVERSITY OF COLORADO announces the opening of a Medical Department at Denver, with preliminary examinations and a four-years' graded course. We trust that the effort at higher medical education is a sincere one and will prove successful.

ETHICS IN VERMONT.—A member of the Vermont State Medical Society is shown by a correspondent of the *New York Medical Journal*, to have advertised a "sure cure" in a local paper. The State Society in its ardor to keep out New York delegates, forgot to look at home.

POLITICS AT THE GERMAN HYGIENIC EXHIBITION.—The German correspondent of the *Medical Press and Circular* gives the following account of some of the true inwardness of the German Hygienic Exhibition. Speaking of the Presidents of Sections in the Exhibitions, and of the fitness of the appointment of Professor Guret, of Berlin, as President of the Section of Field Hygiene, the special correspondent of the *Allgemeine Wiener Med. Zeitung* goes on to say that, if the choice in this case was in every way suitable, it has aroused a decidedly disagreeable feeling of surprise in medical circles to observe that the choice of Presidents of Sections has fallen upon some not in the first rank, whilst a Virchow and an August Hirsch have only received appointments as *members* of the Sectional Committees. The reason why Virchow, the first hygienist—a man to whom the city of Berlin is so much indebted, and of whom it is proud—was not placed at the head of the committee (in case he had not the choice of being so, and declined it) can only be found in political causes. "But what grounds have caused the setting aside of Professor Geh. Med. Rath. August Hirsch? August Hirsch is esteemed in professional circles as one of the first epidemiologists, and outside the scientific world he has been only once spoken of. That was when he returned from Russia, three years ago, from a journey of investigation into the plague at that time rife in that country—a journey undertaken at the instance of the Imperial Government. He had sent in his report to the proper authorities, the Imperial Health Office, and awaited their decision. As this was too long in coming, and as the Health Office made no sign of noticing his work, he withdrew it and published it at his own expense. This procedure later on cost Director Struck a very uncomfortable quarter of an hour in the Reichstag, and therefore it may well be said that since that time Herr Hirsch has not been a *persona grata* in the higher regions. Such reminiscences cannot be often enough freshened up. They afford in the present case, and in still higher degree for our own *epigonen*, a small but valuable measuring-staff, which will aid us in forming a judgment of persons and of the movements of the times."

SUPPOSED SUICIDE OF A YOUNG PHYSICIAN.—A very sad event was the sudden death last Sunday of Dr. Milligan Patchin, of this city. While engaged in cleaning and examining a pistol it went off, with a fatal result.

British Medical Association.

FIFTY-FIRST ANNUAL MEETING.

Held in Liverpool, Tuesday, Wednesday, Thursday, and Friday, July 31, August 1, 2, and 3, 1883.

(BY DIRECT CABLE TO THE MEDICAL RECORD.)

TUESDAY, JULY 31ST—FIRST DAY—MORNING SESSION.

THE opening exercises of the Association consisted of Church service at 10.30 A.M., held at the Pro-Cathedral. A sermon was preached by the bishop of Liverpool. The cathedral was crowded. The music was inspiring. The responses were those of heartfelt welcome. The sermon was eloquent, and the venerable and scholarly clergyman dwelt at length on the intimate relation existing between the physician and his patient, the moral obligation of the former to the latter, the dignity and paramount importance attached by the Christian religion to the human body, and the zeal and devotion thus called forth for untiring efforts in behalf of its healthful preservation.

One thousand members were present, together with a large number of Americans and other foreigners.

FIRST DAY—AFTERNOON SESSION.

The first general meeting of the Association was held in the College, Shaw Street, at 3 P.M. WILLIAM STRANGE, M.D., Senior Physician to the General Infirmary, Worcester, President, in the Chair.

DR. C. G. WHEELHOUSE, of Leeds, Chairman, presented the

REPORT OF THE COUNCIL,

in which important topics requiring the action of the Association were set forth. Among the items of business liable to give rise to much stormy discussion were The Medical Act Amendment Bill, which involved eligibility to registration in the Medical Register as a medical practitioner, unless, in addition to the licence of the General Medical Council, he shall be attached subsequently to one of the universities or medical corporations, and be authorized to register the title so acquired.

The Parliamentary Bills Committee of the Association had proposed the above qualification, to which some of the branches of the Association had already manifested a vigorous opposition, and were prepared to argue against the restrictions involved in the propositions.

The Homœopathic question startled our brethren here as manifestly as it did those of the American Medical Association; but when the book was opened, the same knotty problems were found on page after page, and they seemed no nearer solution than in our own country, especially when it was learned that they had a close relationship to lawyers and the High Chamberlain.

The Bill requiring

NOTIFICATION OF INFECTIOUS DISEASES

will create as much dissension here as did the question of the abuse of medical charity in New York, and there was no well-grounded prospect that the question

was any nearer a satisfactory answer in one case than it was in the other. The law requires every medical practitioner attending on, or called in to visit any person suffering from any infectious disease, to forthwith fill up, sign, and deliver or send to the medical officer at his office a certificate or declaration stating, etc. In one instance, at least, the Town Council appointed as their medical officer of health a *homœopath*, and the significant question had been asked, Was it likely that such a man could expect active support from the medical profession, or that they would report their cases to a man who was a homœopath? The energies and anxieties of the medical profession throughout the United Kingdom are likely to be taxed to their utmost for a satisfactory answer.

FIRST DAY—EVENING SESSION.

The Association met at 8 P.M. The meeting was largely attended and the audience listened attentively to

THE ADDRESS OF THE PRESIDENT-ELECT,

A. T. H. WATERS, M.D., F.R.C.P., of Liverpool.

The President of the Association, next delivered his address, confining himself to a review of the progress and prospects of medical science. During the past few years no science had made greater strides, or had more largely increased its following in earnest and determined workers. As a striking evidence of this was the continued prosperity of the Association, its increase in membership, and its extension of influence. Not only was the spirit of progress manifested in every department of original research, but it had infused itself in the work of the general practitioner, who was eager to receive and adopt advanced views and improved practices. He also sketched somewhat in detail the various advancements that had been made in the different departments of medicine, not only in Great Britain but throughout the civilized world, and argued that the prospects of the future were never more promising, with a field constantly enlarging, and with continued increase of earnest and determined workers.

After the adoption of a resolution of thanks, formally seconded, to the President for his address, and the transaction of some miscellaneous business, the Association adjourned to meet at 11 A.M., August 1st.

WEDNESDAY, AUGUST 1ST—SECOND DAY.

The second general meeting of the Association was called to order at 11 A.M. by the President, PROF. WATERS, of Liverpool.

The special order was the

ADDRESS IN SURGERY,

which was delivered by REGINALD HARRISON, F.R.C.S., Surgeon to the Royal Infirmary, Liverpool.

(For the address in full, see page 113 of this number of THE RECORD.)

The speaker was listened to with profound attention by a large audience, and at the close received a hearty applause, followed by a resolution of thanks, with a second, expressing a high appreciation of the ability and character of his discourse.

It was then arranged to hold

THE NEXT ANNUAL MEETING

at Belfast, Ireland, under the presidency of James Cuming, M.D., F.K.Q.C.P., Prof. of Theory and Practice of Medicine, Queens College, Belfast.

This was in accord with an invitation received from the profession of Belfast at the semi-centennial meeting held in Worcester, England, last year.

WORK IN SECTIONS.

Among the papers and discussions before the Sections noteworthy mention is made of the following:

Section in Public Medicine. — T. Pridgin Teale, M.D., F.R.C.S., of Leeds, President. Paper "On the Injury Done to the Health of the Young by the Present System of Education," by Martin Johnson, Esq.

A communication on "The Sanitary Condition of Liverpool" gave rise to a stirring discussion, and was especially interesting at the present time, in view of some apprehensions which have been manifested since the outbreak of cholera in Egypt. The authorities and the profession were on the alert, and it seemed very improbable that the disease would succeed in making an ingress into that port.

Section in Ophthalmology. — T. Shadford Walker, M.R.C.S., of Liverpool, President. Discussion on tests for color-blindness, opened by Dr. W. A. Brailey, of London, who was followed by Dr. Snellen, of Utrecht. The subject was discussed with special reference to the acuity of vision and color-sense in students and sailors.

Section in Psychology. — T. L. Rogers, M.D., of Rainhill, President. Discussion on the employment of the insane, opened by Dr. D. Yellowless, of Glasgow, First Vice-President of the Section. The general tone of the discussion was in favor of discriminate employment of this class of unfortunates.

SOIRÉE IN THE EVENING.

The President and Local Committee gave a *soirée* in the Art Gallery, at which three thousand guests were present. The affair was entirely successful.

THURSDAY, AUGUST 2D—THIRD DAY.

The third general meeting was called to order at 10 A.M. by the President, Professor Waters, and was devoted entirely to business matters pertaining to the Association.

WORK IN SECTIONS.

The day was spent chiefly in work in the various Sections which were largely attended and noteworthy papers were read and subjects discussed as follows:

Section in Diseases of Children.—SAMUEL JONES GEE, M.D., F.R.C.P., of London, President, delivered an address which consisted in a historical sketch of the literature of children's diseases. Beginning with the ancients he referred especially to Hippocrates' description of *mumps*, and next spoke of Rhazes as the author of the first treatise on the subject of diseases of children. No addition was made to our knowledge until the appearance of Glisson's book on *rickets* in the seventeenth century. The speaker also alluded to Lydenhain's description of

measles, scarlet fever, whooping-cough, and St. Vitus' dance. In the last century, croup, acute hydrocephalus, and the eruptive fevers were especially referred to, and in the present century the study of morbid anatomy and the methods of physical examination of the living subject.

Section in Public Medicine.—Dr. Norman Kerr, of London, read a paper on "The Present Position of the Habitual Drunkards Movement."

Dr. C. R. Drysdale, of London, read a paper on "The Mortality of the Rich and the Poor," in which he compared the mortality of total abstainers with that of moderate drinkers.

Dr. Francis Imlach, of Liverpool, read a paper on "Quarantine," and Dr. Stocker, late Government Emigration Inspector at Queenstown, on "The Sanitary Condition of the Mercantile Marine." The author of the last paper made special reference to the inspection of ships in America as being very complete, and also referred to the import of rags as a probable means of conveying infection.

Captain Douglas Galton, C.B., F.R.S., read a paper on "Hospital Construction." The author reviewed the subject thoroughly and maintained that hospital buildings should be of the simplest kind; that they should not be built on the supposition that they can remain as enduring structures, and for the reason that they are very liable to become dangerously infected.

A portion of the day was set aside for visiting

PLACES OF INTEREST

including the docks, some of the large steamships, art galleries, public halls, hospitals, and public libraries.

BANQUET IN THE PHILHARMONIC HALL.

In the evening a public dinner was given at Philharmonic Hall.

Over four hundred members were in attendance, and numerous guests. Dr. Austin Flint, of New York, was present, and was received with great applause when he proposed in most cordial terms and in behalf of the American Medical Association the toast: "To the British Medical Association."

Mr. Ernest Hart, editor of the *British Medical Journal*, proposed with ready and expressive words the toast, "To our Visitors," which was responded to by Dr. Fenwick, of Montreal, who hoped that on some future occasion the British Medical Association would hold a meeting in Canada, where it would meet with a hearty reception.

Friday, August 3d—Fourth Day.

The Association met in general meeting, at 10 A.M., and was called to order by the President. After the transaction of some routine business the

ADDRESS ON PATHOLOGY

was delivered by C. Creighton, M.D., formerly Demonstrator of Anatomy, Cambridge University. The speaker showed how diseases such as cancer and tubercle acquired an autonomy and assumed an individual existence in the bodies of those in whom they took origin and subsequently infected. The address was listened to with marked attention by a large and appreciative audience throughout its entire delivery.

The author received a cordial vote of thanks for his address.

The concluding general meeting was held at 2 P.M., when hearty votes of thanks were accorded to the local officers, with an interchange of congratulations, and thus terminated most successfully the fifty-first annual meeting.

In the evening the Mayor of Liverpool gave a *soirée* at the Town Hall, where were entertained a brilliant gathering of ladies and gentlemen made up of members and guests.

Arrangements were perfected for numerous excursions to places of interest near Liverpool, to take place on Saturday, August 4th, for the members and their friends.

Reviews and Notices.

Die Anæmie. Von S. Laache. Universitaats-Programm für das 2 Semester, 1883. Christiania: Die Mallingsche Buchdruckerei. 1883.

The very elaborate monograph before us presents the results of a long series of investigations by Dr. S. Laache, made under the direction of Professor J. Worm Müller, of Christiania. It contains so much that is new and valuable that we shall take an opportunity to discuss it fully at another time.

A Treatise on Therapeutics: Comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, M.D. Fifth Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1883.

The exhaustion of the fourth edition of this work in six months is a very emphatic evidence of its value and appreciation by the public. Its merits have frequently been extolled in these columns and we need add nothing now. We would suggest that the chapter on electricity should be revised by an expert; and that it would be very desirable to have something about diet-cures, climate-cures, hydrotherapy, and movement-cures in a book which is a treatise on therapeutics. We trust that the author may have an opportunity to make these additions in another six months.

On the Relation of the Chest Movements to Prognosis in Lung Disease, and on the Application of Stethometry to Examinations for Life Assurance. By Arthur Ransome, M.D., M.A. (Cantab.). With Illustrations. Pp. 100. London: Macmillan & Co. 1882.

The author has devised an ingenious set of instruments by which the upward, forward, and outward movements of the chest-wall are measured and registered. With the aid of this, he has determined some interesting physiological facts, and has also, as he thinks, obtained data by which more exact diagnosis, and especially prognosis in lung disease can be given. The author is modest in his claims for stethometry, and what he does claim is supported by a large number of tabulated observations. His results are confirmed independently by Drachmann, of Copenhagen. The author has evidently expended great care and labor upon his work, which is beautifully printed.

Dr. W. S. Little, of Philadelphia, writes: "Please make the following correction in the report of my paper on Congenital Ectopia Lentis, read at the meeting of the American Ophthalmological Society, appearing in your journal July 28, 1883. For *divergence* please read *detachment of the retina from hemorrhage.*"

Correspondence.

HOW TO PROCURE THE BEST POSSIBLE PHYSICAL CONDITION AFTER PARTURITION.

To the Editor of The Medical Record.

Sir: In the issue of your highly esteemed journal, for June 30th, I find a rather severe and, in my opinion, unwarranted criticism on my paper entitled "How to Procure the Best Possible Physical Condition after Parturition," read before the New York Academy of Medicine, Section of Obstetrics, April 26, 1883. My critic charged me with having advised to close all wounds, suppressing all lochia, and conveys the idea that I advocate a sort of "kolpokleisis" after parturition. The doctor evidently labors under a misapprehension in regard to what I did say. I desired to call especial attention to the beneficial effects of strictly hygienic and antiseptic measures before, during, and after parturition; as they have proved in my hands, as well as in those of Tarnier, of Paris, Barnes, of London, Braun and Spaeth, of Vienna, Thomas, Lusk, Barker, Wiley, Mundé, J. E. Taylor, and many others in this city, to be the only safeguards against those manifold diseases which were formerly collectively termed "childbed fever," and claim in this city alone about *five hundred victims annually*, many of whom would live to-day, had they been attended by antiseptic and hygienic measures instead of acting under the old rule of "beware of meddlesome midwifery." The secretions and excretions of the parturient must also be kept in as normal condition as possible.

The touch-me-not plan having proved a rather dangerous one even among the "Indian Squaws," who cannot avail themselves of the advances in science and art, the gentle artificial dilatation of the cervix uteri during labor pain; the careful pushing back of the anterior labium oris externi uteri, the use of chloroform or chloral hydrate when indicated, the rupturing of long delaying tough membranes, the compression of the fundus uteri before and while the child is being born, the advantages of Orede's method of expressing the placenta, *but, contrary to Dr. Mac Gaughey's advice, without even a little tension on the cord*, is, by no means, an overrated measure—as proved by my own and that of many able accoucheurs, among whom Professor Carl von Braun, of Vienna, under whose supervision over one hundred thousand children were born, where the method had been most successfully applied. As to checking profuse post-partum hemorrhages, and to control the uterus until it had firmly contracted after parturition; the sewing up of extensive lacerations of the perineum, immediately after labor, etc.; upon these points the doctor seems to agree with me; he finds no fault with the advice to use the binder after the placenta and the secundines are born, although it has been discarded long ago in the Vienna lying-in wards; the immediate application of the child to the mother's breast as soon as she had some rest and refreshing sleep, and been made comfortable, is also approved of by my critic. But now, *mirabile dictu!* I am taken to task by the learned doctor for unnecessarily interfering with *nature* and the natural post-puerperium physiological processes, and he charges me with going too far when I remark that a little hemorrhage after parturition is a dangerous thing and should be arrested, etc.; and he lays stress upon my remark, used in a figurative sense, of course, in answer to Dr. Carpenter's question, that not a single drop of blood should appear after the completion of the third stage of labor, and that napkins removed should be perfectly free from color, etc.

In regard to this question I desire again to reiterate what I did actually say, and it was this—that Housmann's reliable experiments, in 1868, instituted upon rabbits, by injecting fluids taken from persons who died of infectious peritonitis, *inevitably caused the death* of pregnant animals; even healthy pus injected into the genitals of animals shortly before or soon after labor, if their *vaginal* or the *mucous membranes of their uteri were wounded* or eroded, caused *always pyæmia or septicæmia and death;* thus showing conclusively the great susceptibility to infections, with consequent fatal results, during the puerperal state. Especially those suffering from primary endometritis and vaginitis during pregnancy, are then usually liable to attacks of parenchymatous metritis or metrophlebitis after childbirth. Even catarrhal secretions, according to Braun, cause ulcerations of the denuded mucosa, which becomes the gate of infection and the starting point of phlegmonous inflammations of peri- and para-metritis, etc. Many cases of puerperal fever undoubtedly originate from the absorption of the foul stuff of decomposition from retained blood-clots, portions of retained placenta, the membranes, purulent matter formed in utero, and from *wounds and bruises and subsequent gangrene of the tissues of the genital tract*, where the puerpera takes the poisons of her own making, says Barnes. Now, with these facts before us, I ask is it not unjustifiable and, to say the least, ungenerous that Dr. MacGaughey says, "As for examining the genital passages of *all* puerpera after removal of secundines, and directing that all slight lacerations should be promptly closed, the advice is very good on paper, but very awkward and difficult and often very unnecessary at the bedside. Besides, the 'meddlesome midwifery' of exposing all women, and of closing slight lacerations or wounds, would involve more, much *more, danger* to the patient than letting them alone." I will, for the satisfaction of the doctor, quote the highest authority in Europe upon this point of the controversy which my critic, not I, has invited.

Braun says: "Slight lacerations of the perineum, or wounds made by episiotomy, are closely united by serres-fines or, if extensive, by metallic sutures; bruised wounds of the vagina should be pencilled with pure tincture of iodine, muriated tincture of iron, thymolized oil, or, according to Fehling, with salicylic powder (one to five of starch) applied two or three times daily. Under this treatment they usually heal in from three to five days."

Regarding the prevention of the least hemorrhage post-partum, I will quote Barnes, of London, certainly as good an authority as there is to be found anywhere. He says: "To obviate hemorrhage post-partum is to oppose septicæmia." I therefore always give, in accordance with the late lamented Prof. Elliot's advice, which I learned from him in 1866, in Bellevue Hospital Medical College, one drachm of Squibb's fluid extract of ergot (or Wyeth's), even in natural labor, after its completion, and I repeat the dose, given in sugar water, on account of the nasty taste of the stuff, until the uterus has firmly contracted, and it becomes evident that no portion of the placenta, the membranes, or of *blood*, has *remained in the vagina* or the *uterus*. *The least hemorrhage from the genitals*, again says Braun, is treated "by the application of iodine, persulphate of iron, hot-water injection, the silver wire or carbolized silk ligature." I shall continue to adduce proofs—not arguments, but undisputed facts—to convince Dr. MacGaughey that it is a good advice to close up even slightly lacerated wounds after parturition, and thus prevent bleeding and septic infection. When I speak of thus treating wounds, I do not mean to close either the uterine or vaginal canal beyond where it is injured, leaving room enough for the shedding of the degenerated lining membrane of the uterine cavity and cervical canal, which cause the lochia, and ought to be colorless and not cruenta, which means bloody. If they become so there is danger of puerperal fever, which can be avoided if all wounds are treated as stated above; nay, according to Prof. Pallen, of this city (now, I understand, of London, England), even a lacerated cervix had better be sewed up soon after parturition than to be left to nature.

Does not Prof. Pallen's advice require exposure of the parts? Does not immediate perineorraphy require the same? But, however, I think I have already taken up

too much of the valuable space of THE RECORD to refute the uncourteous remark of Dr. MacGaughey, when he, in a scientific criticism, uses the words "*too ridiculous, a work of supererogation,*" and other not very complimentary epithets on subjects about which he seems to have a great deal to learn yet.

I am very respectfully, yours,

RUDOLF TAUSZKY, M.D.

THE DISEASE QUESTION IN INEBRIETY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The courteous criticisms of my article on "Obscure Causes of Inebriety," by Drs. Hart and Stair, in Nos. 661 and 662 of THE RECORD, tempt me to make some suggestions.

The question cannot be solved by argument, because it is one of accurately observed facts and their meaning.

Like any other question in physical science, we must have all the facts before we can reach any clear conclusions.

We must accurately study and record the physiological and psychological symptoms, or phenomena of inebriety, and from these histories will appear the laws and forces which govern its origin and progress.

When such a study is made of a large number of cases, by many persons who are more or less competent to judge, in different parts of the country, covering a period of years, their conclusions, when unanimous on certain points, are the best authority, and are entitled to great consideration. Conclusions reached in any other way are open to question and doubt. If the asserted fact that inebriety is always a disease, cannot be sustained by clinical evidence it is an error. It is equally erroneous to deny the disease theory, unless such negations are supported by study of cases. We have repeatedly urged our critics to send clinical histories of cases, that seemed to sustain their views; or cases where the early stage was one of vice and sin, pure and unmistakable, but no one has responded so far.

For over twenty centuries inebriety has been considered a physical disease, and as a student of this phase of mental disorder we are fully conscious that the border lines of its study have hardly been touched. The wide ranges of the unknown before us are far more impressive than any present knowledge of the subject, or opinions of to-day.

If my critical friends will rise above the dogmas of to-day, and examine inebriety independent of all theory or popular notion, its magnitude will silence all doubts, and the great ocean of the unknown will stretch out before them, where each may be a discoverer, untroubled by the notions and theories of others.

Respectfully yours,

T. D. CROTHERS, M.D.

HARTFORD, CONN.

HOW TO ABORT TYPHOID FEVER—A CRITIC CRITICISED.

[We insert the following letter in order to give *altera pars* a hearing. We must add the criticism that the writer makes only assertions, and entirely fails to prove anything whatever. A long series of carefully noted clinical observations can alone prove anything as regards the power of a remedy to shorten or modify a disease of so variable a type as typhoid fever.—ED.]

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the *Medical Age* of June 10, 1883, is an article criticising an article in THE MEDICAL RECORD, which article was criticising the *Age* for using very strong language toward any one who said he could abort or cut short typhoid fever. The *Age* winds up its article by saying: "Dr. Davy now has the floor." Thanks for his liberality. The *Age* accuses THE RECORD of summing up the results of the recent research and debate in France in rather a "pessimistic spirit." That old legend no doubt flitted across THE RECORD'S mind when he soliloquized to himself! again the mountains labored! with minute results. The *Age* does not appear to be impressed in that way, for he says, "the debate strengthened the rational therapeutics of the disease." If the *Age* would prefix ir to rational (irrational) he would be much nearer the truth; for if it was the rational system of treatment, why such pessimistic comments.

. . . . . .

What the immortal Jenner did for small-pox has been done for typhoid fever; it has been demonstrated in over one hundred cases, and extending through five years of time, that that much dreaded disease is amenable to the proper treatment, and that an attack can be broken up and the disease cut short after passing the forming stage. Patients treated according to the hereinafter given plan, have been able to be up and about their rooms from the twelfth to the sixteenth day of medication, and some out riding on the eighteenth day. The fever leaving them, some as early as the fourth, and some as late as the eighth day, depending upon the severity of attacks and faithfulness of nurses. The above good results have been attained by the use of the following prescriptions and plan of treatment faithfully carried out:

PRESCRIPTION NO. 1.

℞. Cohothedræ compound..... ℥iv.

Sig.—Thirty drops every four hours in two tablespoonfuls of water.

PRESCRIPTION NO. 2.

℞. Quinidia sul..... grs. xx.
Camph. pul..... grs. vi.
Ginger pul..... grs. iii.

M. Ft. cht. No. 6. Sig.—One powder every four hours alternating with prescription No. 1. Plan of treatment as follows:

First.—Prescription Nos. 1 and 2 must be given on time, alternating each other, two hours apart, not omitting any doses; if patient is asleep, wake him up; thus keep up medication until the temperature reaches within one-half degree of the normal line; then you may stop medication at 10 P.M. and begin at 6 A.M. After the normal line has been reached and held for two days, you may drop to four doses of each powder per day for four days; after which you can drop to three doses of each per day, until the patient is able to be put upon full diet. Patient should be sponged off with tepid (slightly alkaline) water each evening, until the temperature has reached 100° F., or as long as it feels grateful to the sick.

Second.—Temperature of room must not fall below 68° F. regulated by a good thermometer.

Third.—Patient must lie quietly (not sit) in bed until all tenderness, gurgling, diarrhœa is gone; talking, laughing, or exertion retards the healing of bowels and should be avoided.

Fourth.—For the extreme weakness or profuse perspiration which sometimes sets in when the fever is rapidly declining, use the best old rye whiskey, made slightly bitter with gentian or cimicifuga, and give from one to two teaspoonfuls, as is necessary.

Fifth.—For diarrhœa use fl. ex. guarana in ten- to fifteen-drop doses every three or four hours, and bromides for delirium. Any complication which may arise must be met by attending physician. Diet: Milk, toast, hard-boiled eggs, rice, crackers, coffee, lemonade.

To abort typhoid fever, give Prescriptions 1 and 2, alternating each other every two hours (*i.e.*, each in their place every four hours). Patient must lie down and be quiet from one to three days, owing to the severity of the attack, and take at least five doses of Prescriptions 1 and 2 per day for the first two days, then slowly diminish in number of doses as patient improves.

Ere this you have asked in your own minds what is cohothedra compound? As per analysis by Professor Powers, it is as follows (*verbat. et literat.*):

"PHILADELPHIA COLLEGE OF PHARMACY,
145 North Tenth Street. Founded, 1821.

PHILADELPHIA, November 25, 1831.

J. A. Davy, Esq., Troy, Ohio:

DEAR SIR—The substance submitted to me for analysis has been examined with the following result: It is a bright reddish-yellow liquid, having an aromatic odor, a pungent taste, an acid reaction, and contains (1) 78 per cent. by volume or 71.3 per cent. by weight of absolute alcohol; (2) 0.9098 per cent. of *nitrous ether*, corresponding to 21.8 per cent. of spirit of nitrous ether of the United States Pharmacopœia; (3) a small amount of the alkaloid morphia or morphine (too small for quantitative estimation); (4) very small amounts of the volatile oil of caraway and of resinous and coloring matter.

Respectfully yours,
FRED. B. POWERS,
Professor of Analytical Chemistry."

The resinous and coloring matter found by the professor is from the saturated alcoholic tincture of cohothedra, which composes the body of the compound, which seems to have no alkaloid. The compound now contains a small amount of carbonate of ammonia, which is used in preparing the cohothedra, which addition changes the color to red.

Cohothedra is indigenous to the United States, flowering in July; and is perennial.

The *Age* desired the knowledge and plan of treatment by which such good results were obtained, and as he was so gentlemanly in his last criticism, to withhold it from him would be unkind.

The *Age* now has the floor.

Fraternally yours,
J. O. DAVY, M.D.

SPRINGFIELD, OHIO.

BIBLICAL ETHICS vs. PERCIVAL'S ETHICS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: From what has been said of late in the medical journals and in the daily press with regard to the nature and necessity of different codes of medical ethics one would imagine that physicians are a different order of beings from common men, and that they need a special and peculiar standard of morals by which to regulate their conduct. The old-fashioned idea of right and wrong seems to be lost sight of in most of the discussions. It seems to be taken for granted that there is need for a special standard of ethics for the physician, a standard which he himself has made and which does not apply to other men or other professions. The physician is not to ask, Is my conduct right and just according to the standard by which other men regulate their conduct? but Is my conduct in accordance with the Code of Medical Ethics?

Now in other professions and callings most intelligent men in this day hold that there is a code of ethics, commonly called Christian or Biblical, which binds all men and which is equally applicable to all under all circumstances, in all professions, in all ages. It is a code which is founded in right and justice. And, furthermore, any code of ethics which is not founded upon the principles of right and wrong as set forth in the Bible, and which does not conform to its teachings in this regard, should not be accepted as a rule of conduct. The teachings of the Bible and the dictates of an enlightened conscience are in harmony. Any code of ethics which leads a man to violate his conscience or do that which the word of God or his conscience tells him is not right and just is not to be obeyed.

In that portion of the world called Christendom Christian ethics must sooner or later prevail, even among physicians. Since the Reformation of the sixteenth century the fundamental principle of ethics, as applied to all men, no matter what their calling or profession, centres in the Golden Rule, "As ye would that men should do to you do ye also to them likewise," Luke vi. 31, and "Thou shalt love thy neighbor as thyself." To love thus and to act thus is the sum of human virtue.

Allow me to offer the following brief code of medical ethics as derived from the Bible. Does the physician want more than this standard by which to regulate his conduct?

I.—DUTIES OF PHYSICIANS TO THEIR PATIENTS.

The physician should treat his patient—

1. *With charity or love.*—"Love worketh no ill to his neighbor; therefore love is the fulfilling of the law," Rom. viii., 10. "Let all your things be done with charity," 1 Cor. xiv., 14. "Above all things have fervent charity," 1 Peter iv., 8.

2. *With conscientiousness.*—"He that walketh uprightly walketh surely," Prov. x., 9. "That which is altogether just shalt thou follow," Deut. xvi., 20. "What doth the Lord require of thee but to do justly," Micah vi., 8. "Herein do I exercise myself to have always a conscience void of offence toward God and toward men," Acts xxiv., 16.

3. *With faithfulness.*—"Doing faithfully whatsoever thou doest to the brethren, and to strangers," 3 John v.

4. *With honor.*—"Exact no more than that which is appointed you," Luke iii., 13. "See that none render evil for evil unto any man; but even follow that which is good, both among yourselves and to all men," 2 Thess. v., 15. "Abstain from all appearance of evil," 2 Thess. v., 22.

5. *With patience.*—"Be patient toward all men." "Let patience have its perfect work," 2 Thess. v., 14.

6. *With cheerfulness.*—"A merry heart doeth good like a medicine," Prov. xvii., 22. "A merry heart maketh a cheerful countenance," Prov. xv., 13.

7. *With candor.*—"A man that flattereth his neighbor spreadeth a net for his feet," Prov. xxxix., 5. "Wherefore putting away lying, speak every man truth with his neighbor," Eph. iv., 25.

8. *With helpfulness.*—"But to do good and to communicate forget not," Heb. xiii., 16.

9. *Without boasting.*—"Let another man praise thee and not thine own mouth; a stranger and not thine own lips," Prov. xxvii., 2. "The Lord shall cut off flattering lips and the tongue that speaketh proud things," Ps. xii., 3.

II.—DUTIES OF PHYSICIANS TO EACH OTHER.

Physicians should treat each other—

1. *With justice.*—"To do justice and judgment is more acceptable to the Lord than sacrifice," Prov. xxi., 3. "And what doth the Lord require of thee but to do justly," Micah vi., 8. "The way of the just is uprightness," Is. xxvi., 7.

2. *With peaceableness.*—"Let us therefore follow after the things which make for peace," Rom. xiv., 19. "Be at peace among yourselves," 1 Thess. v., 13. "He will surely reprove you if ye do secretly accept persons," Job xiii., 10. "Blessed are the peacemakers," Matt. v., 9.

3. *With unselfishness.*—"Look not every man on his own things, but every man also on the things of others," Phil. ii., 4.

4. *Not meddlesome.*—"For, brethren, ye have been called unto liberty, only use not liberty for an occasion to the flesh, but by love serve one another," Gal. v., 13. "Happy is he that condemneth not himself in the thing which he alloweth," Rom. xiv., 23. "Who art thou that judgest another man's servant? to his own master he standeth or falleth. Let every man be fully persuaded in his own mind," Rom. xiv., 4, 5. "Why is my liberty judged of another man's conscience," 1 Cor. x., 29.

5. *With generosity.*—"The liberal deviseth liberal things; and by liberal things shall he stand," Is. xxxii., 8. "The liberal soul shall be made fat," Prov. xi., 25.

6. *With honesty.*—"Ye should do that which is honest, though we be as reprobates," 2 Cor. xiii., 7. "Provide things honest in the sight of all men," Rom. xii., 17.

7. *With considerateness.*—"He that despiseth his

neighbor sinneth," Prov. xiv., 21. "Be patient toward all men," Thess. v., 13.

8. *Not quarrelsome.*—"Where envy and strife is, there is confusion and every evil work," Jas. iii., 16. "And be at peace among yourselves," 1 Thess. v., xiii. "Not of the letter but of the spirit, for the letter killeth, but the spirit giveth life," 2 Cor. iii., 6.

9. *The golden rule.*—"Therefore all things whatsoever ye would that men should do to you, do ye even so to them," Matt. vii., 12. "Be kindly affectioned one to another, with brotherly love, in honor preferring one another," Rom. xii., 10. "Finally, be ye all of one mind, having compassion one of another: love as brethren; be pitiful; be courteous," 1 Pet. iii., 8.

III.—Duties of Physicians as Citizens.

"Submit yourselves to every ordinance of man for the Lord's sake; whether it be to the king as supreme; or unto governors, as unto them that are sent by him for the punishment of evil-doers, and for the praise of them that do well. For so is the will of God that with well-doing ye may put to silence the ignorance of foolish men. As free, and not using your liberty as a cloak of maliciousness, but as servants of God. Honor all men. Love the brotherhood. Fear God. Honor the king," 1 Peter ii., 13–17. "Finally, brethren, whatsoever things are true, whatsoever things are honest, whatsoever things are just, whatsoever things are pure, whatsoever things are lovely, whatsoever things are of good report: if there be any virtue and if there be any praise, think on these things," Phil. iv., 8.

"Thou shalt love the Lord thy God with all thy heart, and with thy mind, and with all thy strength. This is the first and great commandment, and the second is like unto it. Thou shalt love thy neighbor as thyself."

Will not a diligent study of Christian ethics enlarge the understanding and elevate the feelings even better, perhaps, than a study of Dr. Percival's disquisitions?

Very truly yours,

Clericus.

Coxalgia and Subcutaneous Osteotomy.—In a paper in the July number of the *American Journal of the Medical Sciences*, Dr. H. R. Wharton records eight cases of coxalgia followed by marked deformity, in which eleven subcutaneous osteotomies of the femur were performed. The results obtained were most satisfactory, not only as regards the immunity from danger in the operation, but also as regards the correction of the deformities and restoration to use of comparatively useless limbs. The amount of constitutional disturbance following the operations was insignificant, as little, or even less, than that which follows a simple fracture of the femur; in no case was there excessive hemorrhage at the time of operation, nor did there follow in any case marked febrile reaction or suppuration; the wounds healed as ordinary tenotomy wounds, and by the end of the first week were generally found entirely closed, so that further dressings could be dispensed with. The facility with which the wounds healed in these cases can only be explained by their subcutaneous character, for although by the operation a compound fracture of the femur is produced, it must be remembered that the original puncture, which is made down to the bone by Mr. Adams's knife, is small, and that when the saw is introduced and cuts the bone, the wound is entirely filled by its shank, by blood and by dust from the sawn bone, so preventing the admission of air to the deeper parts. The results of reported cases bear strong testimony to the general safety of the operation, and there is no doubt that the selection of proper cases, and care as to the position at which the section of the bone is made, will render this operation one of the safest in surgery. The paper concludes with a full and careful discussion of the various details of the operation.

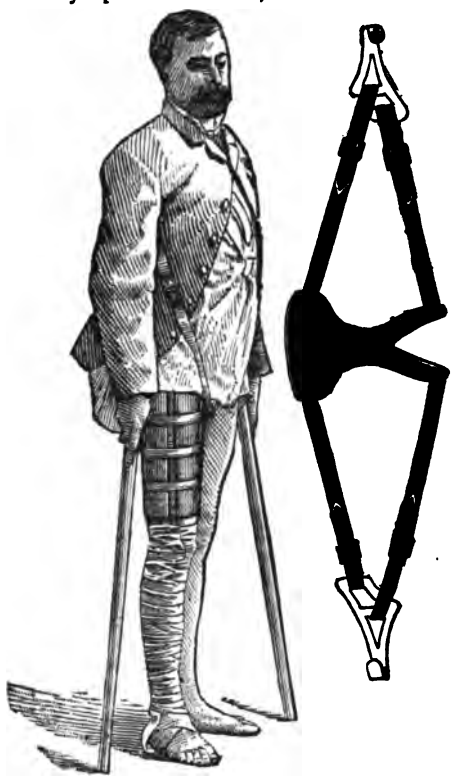
New Instruments.

A NEW SADDLE-CRUTCH.

By JAMES R. TAYLOR, M.D.,
NEW YORK.

It consists of a small saddle so arranged that it can be worn without inconvenience inside of the clothing. A pair of suspenders are attached to the saddle on each side, which terminate in steel hooks that are adjusted to the tops of the crutches. When the suspenders are fitted to the patient these hooks reach up to within about two inches of the axillæ, where the ends appear outside of the clothing, and are the only parts of the apparatus visible. The saddle is well padded to fit the perineum, and of such form that the patient rests upon it without discomfort while sitting.

When the crutches have been placed in the suspender hooks and the patient walks, the weight of his body is carried entirely upon the saddle, and without the crutches



reaching the axillæ, so that no discomfort is experienced, even in taking long walks. He swings easily between his crutches, taking long steps if he chooses, and, if otherwise strong, the weakness in his legs will not prevent him from exercising all that is necessary. The saddle-crutch possesses special advantages over the ordinary crutches, because the weight of the body is borne by the well-cushioned pelvic bones resting upon a comfortable saddle. While designed by nature for the purpose, the inconvenience and suffering attending exercise upon ordinary crutches with the weight of the body suspended upon cross-heads in the axillæ, is gotten rid of; and because the danger of injuring the axillary nerves and blood-vessels is avoided.

The device is designed for use with ordinary crutches, in all cases of lameness of the lower extremities necessitating artificial aid in walking, and has been employed with satisfactory results by several patients, male and female, who have suffered from fracture.

The Poison of Lizards.—Drs. Mitchell and Reichert find that the full-grown lizard will bite, and cause a wound that may prove fatal. Unlike that of other reptiles, its saliva is alkaline, not acid. A little injected into a pigeon caused the death of the bird (which was long, fat, and plump) in less than nine minutes.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 21, 1883, to July 28, 1883.

SUTHERLAND, CHARLES, Colonel and Surgeon, Medical Director, Military Division of the Pacific and Department of California. The leave of absence granted by S. O. 64, Headquarters Military Division of the Pacific, June 30, 1883, is extended two months. S. O. 168, A. G. O., July 23, 1883.

BAILY, JOSEPH C., Major and Surgeon. Assigned to duty as Post Surgeon at Fort Concho, Texas. S. O. 87, Headquarters Department of Texas, July 19, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 30, Headquarters Military Division of the Atlantic, July 20, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending July 28, 1883.

GATEWOOD, J. D., Past Assistant Surgeon. Detached from the New Hampshire and ordered to hold himself in readiness for sea service.

LEUCH, PHILIP, Assistant Surgeon. Detached from the Receiving-Ship Franklin and ordered to the New Hampshire.

SCOTT, HORACE B., Assistant Surgeon. Ordered to the Receiving-Ship Franklin, Norfolk, Va.

MCMURTRIE, D., Surgeon. Detached from the Receiving-Ship Franklin and granted sick-leave.

WHITING, ROBERT, Past Assistant Surgeon. Granted one month's leave.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending July 31, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 24, 1883.....	0	16	39	7	87	12	0	0
July 31, 1883.....	4	43	29	6	52	22	0	0
Deaths.								
July 24, 1883.....	0	4	11	5	19	10	0	0
July 31, 1883.....	1	8	4	6	12	17	0	0

A NEW THEORY OF THE CIRCULATION OF THE BLOOD IN THE ARTERIAL SYSTEM.—A Spanish physiologist, Dr. Ramon Turró, has put forth an ingenious theory as regards the mechanics of the arterial circulation, and we venture to offer an analysis of his views to your readers. The leading ideas are that the elastic fibres in the arterial walls cause dilatation rather than contraction—which latter is the result of the muscular action, and that the muscular walls of the arteries help to propel the blood along.

Turró first exposes what he calls the fundamental error of the reigning theory of the circulation, *i.e.*, that arterial elasticity causes diminution of the calibre of the tube.

It is the muscular and not the elastic tissue, says he, which causes retraction of the canal, as can be proved by removing a small piece of an artery and destroying the vitality of its muscular elements. What is the result? The elastic tissue causes dilatation of the tube, although there is now no pressure to oppose its contraction. On the other hand, elasticity if it acts in the direction of arterial retraction cannot be brought into play until the pressure of the blood has distended the vessel. Now, this pressure, if it really existed, would seriously injure the delicate tissues in the same way that the violent introduction of a large cylinder would do. But the arterial system is not distended; on the contrary, it is contracted by the tonus of its muscular tissue, which is equivalent to saying that its elastic tissue tends to reopen the contracted vessels.

He then tries to prove that even without the presence of muscular tissue in the arterial walls the vessels could not be distended by the pressure of the blood. The sectional area of the base of the cone which represents the arterial system is eight hundred times as great as that of the summit or aorta (Vierordt). Can we, therefore, he says, suppose that the capillaries or base of the cone can be so contracted as not to admit one eight-hundredth as much blood as might enter at other times without causing distention? The theory states that arterial tension is caused by peripheral resistance; if the resistance did not exist this tension would be impossible. Very well, this resistance does not exist; on the contrary, that part of the arterial system which ought to be the smallest is precisely that which is the largest.

It is undoubtedly true that if the vessels tended to close, as the theory affirms, the force of the heart would be insufficient to drive the blood through them. This has been proved by experiments on contractile tubes. Nor is this all. If the conditions supposed by the mechanical theory to exist did so, the heart would have the weight of the whole organism to raise, for movements of elevation and depression are observed in all parts of the body synchronously with the heart's beat. In *résumé* we see that elastic tissue does not exist in the sense of arterial retraction, 1st, because it does not act at all; 2d, because, although the arteries have elastic walls, they act as if they had none; 3d, the supposition being true, the force of the heart would be inadequate to drive on the liquid column. After this general refutation of the mechanical theory of the circulation, Turró attacks Marez's theory in particular. According to Marez if we lessen peripheral resistance, the arteries send on the blood more easily, so that with augmentation of the venous flow we have diminution of arterial tension and increased activity of the heart's beat. Now these conclusions of Marez are negatived by the experiments of Ludwig, Thirz, Czon, etc. (called *vitalistes*, in contradistinction to Marez and his followers, who are called *mechanicistes*), experiments which proved that blood-pressure could be raised at the same time that the frequency of the heart's beat was increased. The *vitalistes* have shown that when vascular paralysis is produced, stasis supervenes, because there is no force to drive the blood on to the heart, which seems to become feeble on this account. If the mechanical theory of the circulation were correct the vessels ought to urge on the blood and increase the venous flow, peripheral resistance being diminished. Instead of this we find the arteries more dilated than when we supposed them distended by eccentric pressure, the venous flow unchanged, and the rate of the heart's beat diminished.

Marez states that when arterial tension augments, the arteries above corresponding to the capillaries are gorged with blood. Now this arterial tension is only an *ens rationis*, besides, the application of the douche shows, that when the blood cannot pass along the capillaries as easily as before, the muscular tissue of the higher arteries relaxes (it is the artery which enlarges, and not the blood which distends it) and makes large channels for it. These changes of diameter are due to vaso-motor innervation. If we accept Marez's theory we must admit that the condition of the small vessels is

opposed to that of the large; the muscular tissue, however, of large and small vessels is continuous, hence the state of the peripheral circulation is in equilibrium with that of the arteries supplying the capillaries. To sum up, we find that the energy of the heart augments and diminishes with the venous flow, but we are not yet acquainted with the true mechanism which modifies its rhythm. Since the elastic tissue is retracted the more that the calibre of the vessel is diminished, we see that we have two forces at work, one tending to close, the other to reopen the canal; dilatation, then, is elastic tension which becomes free. Thus, while the theory affirms that the elastic tissue retracts because it has been distended, we say that it does so because it has been pressed together by the rhythmical action of the muscular elements. The blood having passed that part of the circulatory system where it is urged on by the cardiac systole alone, reaches the arteries possessed of muscular tissue, which contract behind the wave. Thus a slow vermicular movement creeps along. Another important factor is the elastic tissue, which dilates spontaneously at the place that the muscular tissue relaxes, and allows the blood to move along more freely.

Tonicity is a cohesion of the contractile plasma and is in inverse ratio to the quantity of blood which nourishes the muscular fibre. As soon as the flow of blood is diminished, the vessel contracts and adapts itself to the lessened stream. This adaptation is due to the nutritive modification of the fibre. Contraction and dilatation are only two phases of the mechanism of nutrition. The vessel will maintain itself in a permanent state of tonicity at a determined degree as long as a repairing assimilation will compensate for the incessant disassimilation which takes place in its contractile substance by the formation of new products due to its combustions. When equilibrium is disturbed by an excess of nutrition, tonus will be weakened by the nutritive relaxation of the muscular elements; when there is an insufficient amount of nutrition, movements of contraction will take place which may continue up to post-mortem contraction. When the flow is suspended the same disassimilation goes on, or the muscular substance coagulates and uses up its own substance to repair waste until its power is exhausted and it yields to the elastic tension. The contracted condition found in rigid muscle is only a development of the tonic cohesion normally present. Contractility resides in the muscle plasma—elasticity in its envelopes (sarcolemma, perimysium). The activity of the heart is also regulated by its nutrition; its energy must necessarily become less when less blood reaches it, because then its tonicity increases, its substance becomes impoverished, and its contractions become weaker each time. Cardiac rhythm is increased or retarded with the venous flow—energy is in inverse ratio to acceleration. It is in the chemical activity of the muscular substance of the heart that we must seek the secret of its rhythm.

Since the arteries contract when the amount of blood circulating in them diminishes, we must admit that there are rhythmical contractions, because the heart sends the blood on intermittently. The artery conducts onward the powerful impulsion imparted to it by the heart. How do the vessels dilate? The vessel or portions of vessels which are half bloodless retract in virtue of the increasing tonicity by which the plasma exhausts itself in producing contractions; but as contraction increases the elastic tissue is retracted and opposes resistance greater or less according to the contraction, like a spring. The blood exercises a pressure on the walls of the vessel for the reason that they are retracted. This pressure and elastic tension assist in passage of blood-plasma through the vessel, which being nourished, relaxes. Circulation is more active in brain than in crural artery, which seems to indicate that it is richer in muscular elements. The kidneys, spleen, etc., have rhythmical contractions which urge on the blood, so that we may speak not only of one circulation, but of several.

ITCH IN THE CAT.—A correspondent of the *British Medical Journal*, Dr. John Reid, writes as follows regarding a case of "acarus" in a cat: "The cat in question, when seen for the first time (it being a stray cat), was greatly emaciated, and died on the following night (January 5, 1883). The hair on one side of the face and neck, including the ear, was matted so as to resemble one large scab. The itch-insect and eggs were detected in large numbers. The cat's liver contained many abscesses of the size of a pin's head; the lungs, etc., appeared to be normal. Does the cat infect children, etc.? do these infect the cat? or is there mutual infection?"

ELECTRICAL FLANNEL FOR RHEUMATISM.—An electric curiosity which will soon be in the hands of charlatans has been invented by a Dr. Claudet. It is a flannel to cure or alleviate rheumatism. It contains, per kilo, one hundred and fifteen grammes of the oxides of tin, copper, zinc, and iron. A series of threads of this fabric is impregnated with these metallic products, and each series is alternately separated by raw threads. The flannel thus prepared constitutes a true dry pile. It is said to develop electricity by simple contact with the body, or better still, with the products of perspiration.

A NOVEL METHOD OF REMOVING A FOREIGN BODY FROM THE ŒSOPHAGUS.—Dr. Neuman was called to see a horse which was choking; the animal had been eating carrots. Dr. Neuman was unable to reach the foreign body with his hand. The horse's mouth was then opened, and held open by a mouth speculum. Then a common water hose, which was at hand, was passed through the speculum down the œsophagus until the foreign body was reached. The water was turned on full force, and the obstruction disappeared.—*Journal of Comp. Medicine.*

TALMAGE ON DOCTORS.—We all like to be patted on the back once in a while, and brother Talmage does it in the following very vivid and unexaggerated manner: "Encourage all physicians. You thank him when he brings you up out of an awful crisis of disease; but do you thank him for treating the incipient stages of disease so skilfully that you do not sink as far down as an awful crisis? There is much cheap and heartless wit about the physician; but get sick, and how quickly you send for him. Some say doctors are of more harm than good, and there is a book written, entitled, 'Every Man His Own Doctor.' The author ought to write one more book and entitle it 'Every Man His Own Undertaker.' Do you think physicians are hard-hearted because they see so much pain? Ah, no! The most eminent surgeon of the last generation in New York came into the clinical department of the New York Medical College when there was a severe operation to be performed upon a little child. The great surgeon said to the students gathered around him: 'Gentlemen, there are surgeons here who can do this just as well as I can. You will excuse me, therefore, if I retire. I cannot endure the sight of suffering as well as I once could.' There are so many trials, so many interruptions, so many exhaustions in a physician's life that I rejoice he gets so many encouragements. Before him open all circles of society. He is welcomed in cot and mansion. Children shout when they see his gig coming, and old men, recognizing his step, look up and say, 'Doctor, is that you?' He stands between our families and the grave, fighting back the disorders that troop up from their encampments by the cold river. No one ever hears such hearty thanks as the doctor. Under God he makes the blind see, the deaf hear, the lame walk. The path of such is strewed with the benedictions of those whom they have befriended. Perhaps there was in our house an evil hour of foreboding. We thought all hope was gone. The doctor came four times that day. The children put aside their toys. We walked on tip-toe and whispered, and at every sound said, 'Hush!' How loud the clock ticked!

and, with all our care, the banister creaked. The doctor stayed all night and concentrated all his skill. At last the restlessness of the sufferer subsided into a sweet, calm slumber, and the doctor looked around to us and whispered, 'The crisis is past.' When, propped up with pillows, the sick one sat in the easy chair, and through the lattice the soft south wind tried hard to blow a rose-leaf into the faded cheek, and we were all glad, and each of the children brought a violet or a clover-top from the lawn to the lap of the convalescent, and little Bertha stood on a high chair with the brush smoothing her mother's hair, and it was decided that the restored one might soon ride out for a mile or two, our house was bright again And as we helped our medical adviser into the gig we saw not that the step was broken or his horse sprung in the knees. For the first time in our life we realized what doctors are worth. In some of our minds among the tenderest of our memories is that of the old family physician."

THE CURE OF ONYCHIA AND INGROWING TOE-NAIL.—Dr. M. A. Veeder, of Lyons, N. Y., communicates the following: "For the cure of onychia and ingrowing toe-nail the following plan is simple and effective: Destroy the fungous granulations by means of strong carbolic acid, or silver nitrate, and then press back the diseased tissue away from the sharp edges of the nail by means of a piece of the ordinary felt-plaster so much used for corns, which is to be applied as follows: Get a piece large enough, such as that used for bunions if need be, and cut it the size of the exposed surface of the nail. Moisten the adhesive surface of the plaster, and apply it directly to the surface of the nail, pressing the margins of the felt firmly against the diseased parts surrounding the nail. It should be held in place until dry, when it will be found to be strongly adherent, and it may then be covered by a bandage, as a means of exerting still further pressure on the diseased parts. This dressing may require to be renewed repeatedly, at intervals of several days. The length of time required for a radical cure depending upon the extent to which the nail has been disintegrated, the cure not being complete until the parts destroyed are replaced by a fresh growth of nail substance."

THE GROWTH OF CHILDREN.—Some inquiries have been made by Dr. George W. Peckham, of Milwaukee, Wis., regarding the growth of children. The data were collected in Milwaukee. It seems that the density of population acts upon growth by affecting the health conditions, and by making the struggle for existence more intense. The greater height of males than females he finds is due to two causes: First, the arrest of growth of lower extremities in girls of about fourteen and a half years, boys experiencing no retardation in their growth; second, the falling off of the rate of growth in the bodies of girls at about the fifteenth year, and the termination of their growth at about the seventeenth year.

WHO WOULD NOT BE A DOCTOR?—Quite a number of our young men are studying for the medical profession. We do not wish to deter them from this laudable pursuit, for a physician's calling is one of the most honorable, ennobling, humanizing, and useful in the world. But all is not gold that glitters, and the following are some of the sweets of a doctor's life: If he visits a few of his patients when they are well, it is to get his dinner; and if he does not do so, it is because he cares more for the fleece than the flock. If he goes to synagogue regularly, it is because he has nothing else to do; if he doesn't go, it is because he has no respect for the Sabbath nor religion. If he speaks reverently of Judaism, he is a hypocrite; if he doesn't, he is a materialist. If he dresses neatly, he is proud; if he does not, he is wanting in self-respect. If his wife does not visit you, she is "stuck up;" if she does, she is fishing for patients for her husband. If he has a good turnout, he is extravagant; if he uses a poor one on the score of economy, he is deficient in necessary pride. If he does not write a prescription for every trifling ailment, he is careless; if he does, "he deluges one with medicine." If he makes parties, it is to soft-soap the people to get their money; if he does not make them, he is afraid of a *cent.* If his horse is fat it is because he has nothing to do; if he is lean, it is because he isn't taken care of. If he drives fast it is to make people believe somebody is very sick; if he drives slowly, he has no interest in the welfare of his patients. If the patient recovers, it is owing to the good nursing he received; if he dies, "the doctor did not understand his sickness." If he talks much, "we don't like a doctor to tell everything he knows," or, "he is altogether too familiar;" if he don't talk, "*we like to see a doctor sociable.*" If he says anything about politics "he had better let it alone;" if he don't say anything about it, "we like to see a man show his colors." If he does not come immediately when sent for, "he takes things too easy;" if he sends in his bill "he is in a terrible hurry for his money." If he visits his patients every day, it is to run up a bill; if he don't, it is unjustifiable negligence. If he orders the same medicine, it does no good; if he changes the prescription, he is in league with the druggist. If he uses any of the popular remedies of the day, it is to cater to the whims and prejudice of the people, to fill his pockets; if he don't use them, it is from professional selfishness. If he is in the habit of having frequent consultations, it is because he knows nothing; if he objects to having them, on the ground that he understands his own business, "he is afraid of exposing his ignorance to his superiors." '*If he gets pay for one-half his services* he deserves to be canonized. Who wouldn't be an M.D.?—*The Hebrew Standard.*

THE EMPRESS OF GERMANY.—The wife of the American Minister at Berlin, Mrs. Sargent, in a letter describing a call upon the Empress, said: "Her Majesty surprised me by asking about my daughter Lizzie. She had heard that Lizzie began the study of medicine in California, and was now continuing it in Zurich. 'We are much interested in medicine,' the Empress added, and then spoke of the civil war in America and the Franco-Prussian war, saying that the Germans had gained much valuable information from the Americans as to the treatment of sick and wounded soldiers, which was put to good use in their last war."

A CASE OF GLOSSO-LABIO-PHARYNGEAL (OR BULBAR) PARALYSIS WITH THE LESION IN THE CEREBRAL HEMISPHERES.—Dr. C. K. Mills, at the June meeting of the College of Physicians of Philadelphia, said that the present was a good opportunity to put on record an observation on cerebral glosso-labio-pharyngeal paralysis. It is well-known that this affection is usually attributed to degeneration of the cranial nuclei; in fact, it is often called "bulbar paralysis." A patient presenting the oral, labial, lingual, and pharyngeal symptoms of this disorder, had died about two years before at the Philadelphia Hospital. Examination showed no lesion of pons or medulla. Along the outer border of both lenticular nuclei, and extending into the external capsule and claustrum, were long, narrow, and somewhat irregular areas of degeneration; softened or broken-down districts surrounded by walls of harder, darker tissue. Kirchoff and others had since reported similar cases, but up to the time of making the observation he had never seen such a case reported.

THE SIXTH AND SEVENTH CRANIAL NUCLEI.—At a meeting of the College of Physicians of Philadelphia, June 6th, Dr. Harrison Allen called attention to the curious apparent discrepancy between the anatomical and physiological relations of the sixth and seventh cranial nuclei. He said: "The cranial nerves at their nuclei of origin and in the course of their intrinsic fibres may be involved in diseased action. It would seem to be more than a coincidence that the nuclei of the ninth, tenth, and eleventh nerves are arranged in a definite series, forming the trineural fasciculus; and that the nerves themselves are

associated in function. But this line of reflexion is useless when applied to the nuclei of the sixth and seventh nerves. These nerves appear to have no function in common, and yet they arise, in part at least, from the same nucleus. In their range of variation they have no relation with one another; nor in any animal known to the writer does the sixth nerve spring from the facial trunk, but always (in variations from the human type) from the third. The third, fourth, and sixth nerves are naturally associated; but no reason is assigned for the withdrawal of the nucleus of the sixth from the mid-brain; where the nuclei of the third and fourth nerves lie, to the hind-brain, where it is in association with an alien, namely, the seventh. Associated paralysis of the third, fourth, and sixth nerves is common; but paralysis of the sixth and seventh is rare.

HUMAN PARASITES.—Dr. George Sutton, in an article in the *Cincinnati Lancet and Clinic*, gives the following list showing the principal parasites which infect the human system:

Microzymes.—Micrococci: Probably of small-pox, cow-pox, measles, scarlatina, varicella, erysipelas, syphilis, gonorrhœa. Bacilli: Probably of typhus fever, typhoid fever, tuberculosis, anthrax, leprosy. Vibrio. Filaria: Probably of elephantiasis. Spirillum: Probably of relapsing fever. Bacteria: Probably of septicæmia.

Entozoa.—Vermes—Cestoda: Probably of tænia elliptica, tænia flavo punctata, tænia medio canellata, tænia nana, tænia solium, tænia bothriocephalis candatus, tænia bothriocephalis latus. Nematoda: Probably of ascaris lumbricoides, ascaris mystax, oxyuris vermicularis, filaria medinensis, dochmius duodenalis, trichocephalis dispar, trichina spiralis. Trematoda: Probably of monistoma, distoma.

Epizoa.—Insects—Acarus scabei. Pediculida: Probably of pediculus capitis, pediculus vestimenti, pediculus tabesentium, pediculus pubes originalis. Pulix: Probably of pulix irritans, pulix penetrans. Ixodia: Probably of ixodes americanses, ixodes numarias, ixodes erenatus.

Undoubted vegetable parasites and their diseases.—Microphites—Achorion schonleinii: Probably of favus. Trichophyton tonsurans: Probably of porrigo scutulate. Microsporon andonini: Probably of porrigo decalvans. Microsporon mentagrophites: Probably of mentagra. Microsporon furifur: Probably of tinea chloasma.

SEA-BATHING.—At the present time, when the sea-bathing season is about to commence, it may be useful to recall the chief general indications and contra-indications which respectively sanction and forbid bathing in the sea. "Shall I bathe?" This is a question which thousands of health-seekers will be asking of their doctors during the next few weeks. While the stimulus of a fresher air, of change of scene, and of new occupations, together with rest from accustomed work, are the elements from which the weakly, the worn, and the worried reap physical and mental restoration in a sojourn on the sea-coast, it is unquestionable that bathing in the open sea is, in itself, a powerful restorative agency, which many persons may employ with very great advantage. The universal experience of our race, through unnumbered ages, has shown the value of sea-bathing in both preventive and curative medicine. A good rule, laid down by an experienced physician, is this: In all cases showing impaired functional powers, without any manifestation of inflammatory symptoms—in short, in those cases in which the exhibition of alteratives and tonics is indicated—sea-bathing, may, with proper precautions, be resorted to; it is contraindicated in persons of plethoric habit of body, in cerebral congestion, in organic disease of the heart, in aneurism, and in all persons who have the inability safely to encounter a comparatively severe shock; while it is also to be forbidden at certain periods in which the female constitution is not prepared for the application of powerful remedies. Because it tends, in certain conditions of impaired health, to cause determination of blood to the viscera. Bathing in the open sea is generally unsuitable for persons disposed to congestive disorders of the lungs, kidneys, liver, and brain. Albuminuria, advanced anæmia, and a liability to hæmoptysis, are also conditions with are usually accepted as contra-indicating sea-bathing. It is hurtful to bathe babies in the sea; children under two years of age are too young to bear with advantage the comparatively severe shock of a cold sea-bath. In old age, when the bodily powers are unequal to a vigorous reaction, sea-bathing may do much harm, especially in the subjects of extreme arterial degeneration. In suitable cases, and under proper precautions as to time of bathing and duration of exposure, a daily bath in the open sea is a valuable restorative. In individuals who are fairly robust, it is a stimulant alterative and tonic, promoting appetite, tissue-change, and excretions, and bracing up the nervous, vascular, and muscular systems. Sea-bathing is especially useful as a powerful and unsurpassed tonic in delayed convalescence from acute diseases, in many chronic affections, and in persons whose strength has become enfeebled by injurious excesses, by mental strain, or by unhealthy occupations.—*British Medical Journal.*

AWAY WITH THE SPOON.—A contemporary proposes to get rid of the use of "spoonfuls" as doses by the following expedient: "Let each bottle (vial) be provided with a strip of paper pasted on, which strip is accurately divided with as many lines (marks) as the bottle contains doses to be taken, the lines to be numbered, beginning with the topmost, and let the directions read: Take one eighth (fourth, twelfth, etc.), part, etc., as the direction shall run, or, perhaps better, take one division, etc. The strip to reach from the bottom of the bottle (vial) to the top of the liquid, not farther."

PROFESSOR VIRCHOW AND THE SWISS PILL.—Professor Virchow has fallen under the displeasure of the Congress of German Physicians, a society which meets annually to take cognizance of medical ethics and allied matters. He has been charged with giving a testimonial to a secret remedy, the pilulæ helveticæ of a Dr. Brandt, of Schaffhausen; and doubtless many of our readers have themselves received the laudatory notices which accompany these famous "pills," the distribution of which has not been limited. Virchow, in a letter to the *Berliner Medizinische Wochenschrift*, marvels at the amount of displeasure which he has apparently incurred. He says that he received some of the pilulæ helveticæ last winter, with a letter from Dr. Brandt asking him to give them a trial. Some time afterward came another appeal, and, being himself in the need of such a remedy, he tried their effect on himself. The result was so satisfactory that he penned a few lines to the inventor, which the latter forthwith published without Virchow's sanction, pleased, no doubt, when such testimony came from so high a quarter. From that time Virchow has had no peace—letters and circulars, signed and unsigned, have been addressed to him complaining that he was violating the ethical law in giving a testimonial of a secret remedy; and this has culminated in the remonstrance addressed by the chairman of the committee of the Aerzte-vereinbund. The committee also procured an official analysis of the pills, which, however, only went to show that their composition was nothing very extraordinary. Virchow denies that he ever gave a testimonial at any time for these or any other pills. He withdraws from the Bund, and appeals from its arbitrary action to his medical brethren at large to pass a judgment free from the paltry and narrow trades-unionism which characterizes this act.

ANSWERS TO MEDICAL CORRESPONDENTS.

Dr. S. W. G., Iowa: Yes, two grains of strychnia was a large dose for that baby.

No, his convulsions were not entirely due to teething.

No, it does not make any difference if you did pass second in your class when you graduated; the law will hold you just as responsible.

Yes, before a jury it would perhaps be a mitigating circumstance that you had graduated without ever seeing a case; but the father of the child could not prosecute your medical college.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 6 NEW YORK, AUGUST 11, 1883 Whole No. 666

Original Articles.

THE PRESENT ASPECT AND FUTURE PROSPECTS OF MEDICINE.

AN ADDRESS DELIVERED AT THE FIFTY-FIRST ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.[1]

BY A. T. H. WATERS, M.D., F.R.C.P.,

SENIOR PHYSICIAN TO THE ROYAL INFIRMARY, AND PROFESSOR OF MEDICINE IN UNIVERSITY COLLEGE, LIVERPOOL, PRESIDENT OF THE ASSOCIATION.

GENTLEMEN: I esteem it an honor of no common kind to be elected President of the British Medical Association, and to be called upon to take the chair at one of its annual gatherings; and to me the honor has a special value, for I can look back on many years of close relation with the society; it has been the means by which I have formed friendships whose importance I cannot overestimate, and its meetings have been among the most interesting circumstances of my life. Your kindness, therefore—the kindness of my fellow-residents and of the Association at large—in placing me here to-day, deserves my warmest thanks, and will always be held in grateful remembrance.

Twenty-four years have passed since the Association met in Liverpool to celebrate its twenty-seventh anniversary. These years have been marked by the uninterrupted prosperity of our society, by a large increase in our numbers, and an increasing interest in the proceedings of our annual gatherings. With reference to our success, it may, perhaps, be sufficient to say that, whereas at that time and up to the year 1866 we numbered about twenty-three hundred members, we are now ten thousand strong. May the future progress of the society be ever in accordance with its experience of the past; and may he who shall open its next session in this city be able to say, with as much truth as I can to-day, that the Association has increased in strength with its increased years.

But, gentlemen, while we congratulate ourselves on the success of our efforts in connection with this large Association, let us never forget that we are all members of a still larger body—that we belong to the great commonwealth of medicine, which knows no distinction of race, or clime, or people; and that, while it is our duty, and should always be our aim, to promote the special objects for which our society was founded, our highest duty and our noblest aim should be to foster the general interests of medicine, and to endeavor to advance it as a science and as an art; and, in the few remarks which I have to address to you on this occasion, I purpose to dwell, very briefly, on some of those points which seem to me worthy of our attention with reference to the present condition and future prospects of our profession; for, although there are many topics of local interest to which I might refer, all that relates to Liverpool—its medical history, its hospitals, its school of medicine, its University College, its public buildings, its river, and its docks—has been so well treated of in some recent numbers of our *Journal*, that any further observations on the subject are altogether unnecessary.

When last we met, in Worcester, we celebrated our jubilee, and it was well to look back on the period which had elapsed since our society was founded, and to refer with satisfaction to the good work which it had done, and the progress which medicine had made during the previous fifty years. And while echoing to-day all that was then so ably expressed, I think it would be well if we were to consider that we have now entered on a new phase—that we have taken, as it were, a new departure, and that with the great advantages we possess we should, as a society, and also as a profession, strive to develop our science more rapidly in the future than it has been developed in the past, and that our progress should be more marked in all that relates to the higher aspirations of our calling.

Nor are there wanting signs which point to the probability of such a consummation. We now see a higher standard of medical education insisted on; we see, on all sides, the inductive method of investigation brought to bear on the great problems of medicine; more and more we see dissatisfaction with our present uncertain and inexact knowledge; and we cannot doubt that the observations which are being carried on, and especially those which are being conducted under the auspices of our Collective Investigation Committee and of the Society for the Cultivation of Medicine by Original Research, will before very long bear fruits, and lead to generalizations of the most important kind.

To my mind there is nothing in the present aspect of medicine more satisfactory, or more likely to raise it from the region of empiricism and place it on a higher scientific level, than the endeavor now being made to render our knowledge more definite and exact; and if I were to point to one circumstance which, in my opinion, has, probably more than any other, contributed to this result, I should say it was the introduction into our practice of *instruments of precision*. These have furnished us with means by which the senses may be placed in immediate relation with the actual phenomena of disease, and these phenomena are sometimes of so simple a character, and yet so indicative of the general morbid state, and require so little mental analysis, that the very tyro can almost read their significance.

No more important step was ever made in practical medicine than that of the application of physical principles to the diagnosis of diseases of the chest. In what condition would now be our knowledge of diseases of the lungs, had the researches so largely associated with the name of Laennec never been made? In what condition was the knowledge of cardiac diseases before the investigations and experiments of the physiologist gave us definite information with reference to the movements of the heart, the action of its valves, and the causes of its sounds? The differentiation of lung and heart affections by the aid of physical inquiry, the possibility of making an exact diagnosis without investigating one single general symptom, constitute a triumph for medicine which is not to be surpassed in the practical application of scientific principles in any other department of human knowledge; and we must not forget that this marked advance has been achieved in a comparatively short space of time, for it was not till 1819 that Laennec gave his observations to the world.

What can be more striking than the results of physical inquiry in pulmonary or cardiac diseases? Let us suppose a student in medicine following, for the first time, a competent teacher through the wards of a hospital. He sees him stop at the bedside of a patient suffering from one of these affections; he watches him as he makes his examination; he hears a few leading ques-

[1] Held in Liverpool, July 31, and August 1, 2, and 3, 1883

tions put, he sees a few gentle blows struck; a brief application of the stethoscope; and then, without any hesitation, the physician, turning to his class, tells of the nature of the case—that there is consolidation of a lung; effusion into the pleura; disease of a particular valve of the heart, hypertrophy of its walls, or degeneration of its fibres. He speaks of the mode of origin of the affection, the course it will probably take, and the issue that will come. Our student is struck with astonishment at the apparent facility of the diagnosis, and the rapidity with which it has been made. He watches the progress of the disease, and he finds becoming developed the conditions which were foretold; and (if, unhappily, the case terminates fatally), on a subsequent day, following his teacher to the *post-mortem* theatre, he sees the body of the patient submitted to examination; he sees revealed by the scalpel the condition which exists. He sees that there is consolidation of a lung; effusion into the pleura, valvular disease of the heart; hypertrophy of its walls, or degeneration of its fibres; he sees, in fact, a verification, in its minute details, of the diagnosis that was made, and he is apt, perhaps, at once to conclude that medicine is one of the most exact of the sciences.

It would be well if in all departments of medicine there were the same facilities for exact diagnosis as in diseases of the heart and lungs; but what the application of acoustic principles has done in these affections, the application of chemical principles, and the use of the microscope, the ophthalmoscope, the laryngoscope, and the sphygmograph, have in a measure done for the diseases of some other organs. And may we not hope that, with reference to the diseases of the nervous system—the most obscure of all which come under the notice of the physician—the researches of the present day, and the attempts now being made to clear up our knowledge of the physiology of the brain, and to localize its various functions, may be followed by results which will add largely to our powers of differentiating nervous affections, and of successfully treating them?

Again, in referring to instruments of precision, let me observe how important are the results which have followed the use of that instrument which, when the Association last met here, was scarcely ever used in this country, but which is now the constant companion of every practitioner—the clinical thermometer. How valuable is the information which it gives! How intimately does it place that important factor of fever—increased temperature—under our observation! Without attempting to discuss the relations of heat to the other phenomena of fever, I may observe that, in a large number of cases of disease, the measure of the temperature is undoubtedly the measure of the danger; and that the immediate recognition of its rise to an inordinate extent is the first step toward the application of means on which the life of the patient may depend. Were this the proper occasion, I should like to dwell on the great value which the scientific use of the thermometer has been, and is likely still further to be, to the practical physician. Not only has it enabled him to recognize conditions of hyperpyrexia fraught with extreme peril, and thus to use at the right moment measures for reducing temperature which have been followed by the most beneficial results; not only has it afforded a means by which the constant attendant on the sick can ascertain the development of serious symptoms; but its further application, and the recognition, by its use, of the special oscillations of temperature which characterize some diseases, have enabled the physician to differentiate between affections in which other means of diagnosis have been insufficient; while, by still more extended observations with the instrument, we shall perhaps be able to explain, more fully than we now can, the causes which underlie the variations of temperature which are so marked a feature of some affections; and possibly this knowledge may influence beneficially our treatment of them. And, in referring to this subject, I cannot refrain from alluding to the fact that it was a Liverpool physician, Dr. Currie, who, early in the present century, was the pioneer in the use of cold applications to the surface of the body in the treatment of fevers; and, although Currie's practice fell into disuse, the merit of initiating a method of reducing temperature, which the use of the thermometer has enabled us in the present day to place on a more successful basis, may, I think, be fairly claimed for him.

How often has the use of the laryngoscope enabled the practitioner to recognize the true bearings of certain laryngeal symptoms, and to differentiate between organic disease of the larynx and the results of pressure from a thoracic tumor! How often has it enabled him to decide on the nature of a laryngeal growth, and the possibility or otherwise of successful medical or surgical treatment! How much do we not owe to the introduction of the ophthalmoscope—an instrument which has literally thrown a flood of light on the affections of the eye, and may be said, indeed, to have revolutionized the whole practice of ophthalmic medicine; while, by enabling us to recognize certain conditions of the eye, and to interpret their significance with reference to other morbid states, it has materially aided the work of the general physician.

The sphygmograph is an instrument which, though largely employed in hospital work, has not hitherto found its way into general use. It cannot be said to have had much influence on our practice; but I think we often derive important indications from it with reference to the state of the arterial system and the degree of arterial tension which exists; and possibly by a more frequent employment of it we might be able to recognize, at an earlier stage than we now can, those manifestations of incipient disease which frequently pass unnoticed, and therefore untreated. Further, in certain acute diseases, the sphygmograph often gives indications which are important in regard to prognosis. The hyperdicrotism of the pulse, as shown by the instrument, may indicate the extreme gravity of a case which other symptoms fail to point out.

I am glad to see that in the Section of Medicine a discussion is to take place on the subject of arterial tension, and I hope that some valuable information may be elicited from it. I believe that important results may be expected to follow from more exact observation on the condition of the arterial system.

The great results which have followed the application of physical principles to the recognition of disease, constitute the common-places of medicine of the present day; and perhaps I ought to offer some apology for dwelling upon them; they are, nevertheless, the great facts of medicine, they are the facts to which we can point as showing the scientific basis of our art, and their value can be appreciated only by those who are engaged in the practical application of therapeutics. They are, moreover, the main guarantee which we have for progress in the future; for who shall doubt that the next half century will be more fertile in the production of instruments of precision, and in bringing scientific principles to bear on the work of the physician, than that which has just passed? Who shall doubt that as the result of the more rigid application of the inductive method of research, and more careful and combined clinical investigation, our powers of generalizing on disease, and of differentiating between the variations which it presents, will be largely increased; that diagnosis will be more easy, and treatment more successful?

In considering the standpoint of medicine, we should always bear in mind that medicine must be judged by the therapeutic results which it achieves; and in proportion as we can show that the researches of the physiologist, the pathologist, and the chemist, and the application of scientific principles, have enabled the physician to deal more successfully with disease, to anticipate its development, to recognize its earliest symptoms, to mitigate its severity,

and reduce its rate of mortality, so do we establish for our art a claim on the confidence and gratitude of mankind; and in this respect the present state of medicine shows no slight advance on the past, and promises a more rapid progress in the future. The past five and twenty or thirty years—not to go further back—have been marked by the general development of views with reference to many diseases, such as have largely and beneficially influenced our treatment of them; and as I took an illustration of the value of physical investigation from diseases of the chest, permit me to refer again to some of these affections in speaking of the question of treatment. With regard to the affection which we term pneumonia, have we not seen the introduction into practice of a mode of treatment which has deprived the disease of much of its terror, and greatly reduced its mortality? Whatever be the views which we entertain of the nature of pneumonia, the important fact remains that we may enumerate among the successes of medicine of the present day a large reduction in the mortality from the affection.

Again, the recent development of the practice of tapping the chest in pleuritic effusion, an operation comparatively rarely performed thirty years ago, is, in my opinion, a very marked improvement in therapeutics. Those who have carefully watched the progress of medicine in this matter, know full well how great have been the changes which have taken place within the last quarter of a century, and especially since the introduction of the aspirator. It is impossible to refer to all those to whom we are indebted with reference to this subject, but Trousseau, as a pioneer, and Bowditch, whose large experience and satisfactory results exercised so beneficial an influence, I must not pass over; while there are many in this country to whom we owe no less a debt of gratitude. There is, perhaps, from the facility with which tapping may be performed, and the almost entire absence of risk when it is properly performed, a fear that it may sometimes be resorted to unnecessarily. But, from what I may term a somewhat large experience in the operation, I can speak with confidence of its value and safety in both acute and chronic effusions; and I cannot but think that, as the result of the early performance of the operation, we shall see, every year, fewer of those cases of deformed chest which so frequently follow neglected pleuritic effusion.

How satisfactory have been the practical results which have followed the researches that have been made, within the past half century, into the nature of continued fevers! It is now about forty years since Stewart (whose recent loss we have to deplore) published his investigations in typhus and typhoid, and showed their distinct and separate individuality. Other laborers have since worked in the same field, and have established, beyond a doubt, the facts which he then demonstrated, the knowledge of which has largely tended to the prevention of these affections, and enabled us to trace to their source many outbreaks which, in former times, would have been involved in mystery. Nor can we point, perhaps, to any one circumstance which has had a more beneficial influence on the treatment of these diseases than the recognition of the pathological changes by which they are characterized. The precautions which we consider imperative during convalescence in the one disease—precautions which may be, in large measure, neglected in the other, are but the outcome of the careful investigations which have been made into the morbid changes by which the two affections are attended. And if we have abandoned the idea that these fevers can be cut short by any measures, or the administration of any drug; if we have no faith in any specific line of treatment, and are, for the most part, content to watch our patients carefully, and to guide them, as it were, through their attacks, this is not scepticism—it is the result of a more intimate knowledge of these diseases, of a better acquaintance with their natural history, and a better appreciation of their pathological changes. We wait for further insight into their essential nature, and we are not without hope that fresh discoveries will give us increased power, in regard both to their prevention and their treatment.

It is impossible to enumerate the various affections in which there is a marked improvement in treatment, and those which I have referred to must be considered simply as illustrations of my position; but while I speak with satisfaction on this subject, I must not forget to mention that, in the midst of many successes, we have instances of, I will not say actual, but comparative failure. Our knowledge of the pathology of some affections remains very imperfect, and our therapeutics are in some respects very unsatisfactory. Although rheumatic fever is one of the most common diseases, it must be confessed that we are ignorant of its pathology. During the past few years there has been introduced into practice a mode of treating the disease by the compounds of salicylic acid, which has met with general adoption, and has been largely successful. I can add the testimony of my experience in its favor; but still, with all the opportunities which we possess of studying the affection, we are as yet unable to give any satisfactory explanation of its essential nature.

Again, how unsatisfactory is the knowledge we possess with reference to the pathology of diabetes! We have long recognized its clinical features, and we are often able to modify its course, and mitigate its symptoms; but of its real nature we are ignorant, and nothing has tended to show this more than the discussion recently carried on at one of our societies. But this confession of our ignorance is one of the most promising features of our day, it is that which gives us assurance that every effort will be made toward increased knowledge in the future. Whence comes this want of success in the investigation of the nature of diabetes? We have approached it from the physiological side, from the chemical side, and from the pathological side, and have failed. Can we hope that by combined observation of its clinical features, of its life-history, and its relation to families and individual peculiarities we may elucidate its nature? May we hope that it is one of those subjects which will be inquired into, and the problems of which will be solved by the labors of our Collective Investigation Committee? I recommend it to their consideration.

And here I must express the great satisfaction with which, in common, I am sure, with every member of the Association, I have seen the establishment of this Collective Investigation Committee, how strongly I feel that it is capable of accomplishing most valuable work, and how much I think we are indebted to Professor Humphry for initiating the movement. Doubtless, a large part of the work of the committee will consist in collating facts with reference to specific diseases; but there is one line of inquiry which, I trust, will receive from it a share of attention. I mean the consideration of the points of difference between functional disturbances, and the early symptoms of organic affections. How difficult is it sometimes to say, when some slight symptom presents itself, and when no objective signs of organic disease can be discovered, whether that symptom indicates incipient structural change or mere functional disarrangement! Upon the right appreciation of the phenomenon, however, the safety of the patient may depend; for, although we stand almost powerless to arrest the course of confirmed structural changes, there can be no doubt that, could we recognize the earliest steps in these changes, could we see clearly the points of departure from normal conditions in various chronic and hitherto incurable maladies, we might do much to check these alterations of structure, and prevent the further progress of the disease.

In an investigation of this kind, our hospital work is comparatively useless. There we are brought into relation, for the most part, with disease already well marked—disease which has produced its easily recognizable re-

sults; and if patients present themselves with slight symptoms, they perhaps soon recover, and are lost sight of. It is in the daily work of private practice that observations such as I have referred to can alone be satisfactorily made; and it is, therefore, to the great bulk of practitioners throughout the country that we must look for aid in this matter. It involves a lengthened study of each individual case; a close watching, not for weeks or months, but for years; and perhaps the facts gathered in a lifetime might be but few. It relates to the consideration of subjective symptoms which we cannot accurately estimate with our present physical means, but which are intimately associated with individual peculiarities and idiosyncrasies, and often form the most important elements in our diagnosis, prognosis, and treatment. It may be that, with more refined instruments of precision and greater scientific knowledge, we shall bring many of these symptoms within the range of physically recognizable facts; but, in the meantime, inquiries such as I have referred to may materially aid us.

But, gentlemen, of all the questions which now engage the attention of the pathologist and physician, there is no one which surpasses in importance that which relates to the dependence of certain diseases on micro-organisms. The subject is one of the greatest possible interest, and fraught with bearings of a practical character which already have had, and are doubtless destined still further to have, a vast influence on the prevention and treatment of disease. The establishment of the fact that pébrine, chicken-cholera, and splenic fever depend on the presence of specific microbes, and that relapsing fever has associated with it, if not indeed causing it, a like organism, must be classed among the most striking discoveries of the present day, and undoubtedly mark an epoch in the history of pathological science; while the gradually accumulating evidence that tuberculosis is the result of a parasitic element seems likely to lead to its being placed in the same category as those affections the pathology of which appears now to be clearly established. Moreover, the brilliant results which have followed the process of attenuative culture of the virus of some of the affections to which I have referred, and the protective influence of vaccination by these attenuated fluids, as carried out by Pasteur, lead us to hope that, by further researches in the same direction, we may yet discover some means for checking the ravages of tuberculous and other allied diseases, as certainly as the great discovery of Jenner has enabled us to check the ravages of small-pox.

Nor is it possible, perhaps, to point to any single fact in connection with the practical application of science which is more striking than that of the relation of disease to minute organisms. The whole subject has been evolved from the researches of a few naturalists who studied the smallest of living beings. What possible use, might it not have been said, could investigation of this kind have in reference to the maladies either of man or the lower animals? And yet we have seen that these studies of minute life have led to the prevention of a disease which threatened to destroy the source from which we derive one of our staple products of manufacture; they have been largely instrumental in checking the ravages of a malady which is so fatal among the flocks and herds of various countries; they have led to the introduction into the practice of surgery of a mode of treatment, the beneficial effects of which it is not for me to dilate on; and, lastly, it seems likely that they will materially alter our views with reference to some of the most serious diseases to which mankind is subject.

These facts tend to show on how wide a basis the science and art of medicine rest, and how closely their advance is mixed up with, and dependent upon, the progress of other sciences. In truth, there is nothing in the whole range of nature which the physician may not make use of for the purposes of his work.

Of the many problems which await solution in connection with the subject which I have just considered, no one is more pressing than that of the dependence, or otherwise, of pulmonary consumption on the bacillus which has been so largely found, not only in the morbid deposits which result from the disease, but in the expectoration of phthisical patients. Should it be found that in all cases of genuine tubercular phthisis the bacillus tuberculosis is present, and should future researches show that the disease is caused by the parasite, a solidity will be given to the pathology of the affection, and perhaps the therapeutics of it will be materially aided. Speaking from clinical experience, I cannot but conclude that the disease to which we give the name of phthisis has more than one mode of origin. Further investigation will perhaps clear up the doubt which exists on this point; and here I should like to observe that there are some affections of the lungs which closely resemble, in their clinical features, acute phthisis, and yet which, under careful treatment, do not go on to a fatal issue. Of such cases I have now seen several. Their general symptoms, their physical signs, their temperature-ranges made me conclude that I had to deal with cases of acute pulmonary tuberculosis, and I have expected a fatal result, but recovery has taken place. These cases occurred before attention was directed to the presence of bacilli in the sputum of phthisical patients, and no examination of this secretion was made. In instances of a similar kind, we shall now be able to use this method of investigation, and possibly it will afford a valuable means of differential diagnosis, and enable us to give, in cases where the bacilli are absent, a more favorable prognosis than the general symptoms would otherwise warrant. I may say, in regard to the cases to which I have referred, that they were treated by free nutrition, generally the exhibition of quinine, and a somewhat liberal quantity of alcoholic stimulants.

The great point which remains to be decided, and which I hope the discussion which will take place at this meeting will help to decide, is, whether the so-called *bacillus tuberculosis* is the cause, or the consequence of the tuberculous disease.

I have spoken of the advance which medicine has made as the result of the application of scientific principles, and an improved knowledge of physiology and pathology; and I would further remark that the past years have been fertile in the introduction of substances which are of the highest value to the physician in the actual treatment of disease. The bromide compounds, chloral, croton-chloral, the various forms of pepsine and pancreatine, the salts of salicylic acid, may be enumerated, among others which the chemist has furnished for our use; and, while we may perhaps feel that he will best serve the ends of medicine who shall teach us how to employ most successfully the remedies we already possess, and while we would deprecate the incessant desire for the introduction of new chemical compounds, let us by no means discourage the laudable ambition of enriching our Pharmacopœia with agents of sterling value. We must never forget that, in addition to the useful drugs to which I have already referred, the present age has given us, by the agency of the chemist, means by which we can annihilate the pangs of the most painful manipulations of surgery, and obviate the tortures formerly incidental to all operative procedures.

In the face of such a fact as this, we may be pardoned if we express a doubt whether we have arrived at the limit of our therapeutical discoveries, and whether we may not hope that the labors of the chemist will, in the future, give us new elements for our use, or that some of those compounds which now possess only a scientific interest may, in course of time, pass into the hands of the practical physician, and add to his powers of controlling certain forms of disease.

It is not for me to speak of the triumphs of modern surgery, and the successful results which have followed the application of scientific principles in this great de-

partment of medicine. We are apt, perhaps, to conclude that it is here that the most striking advances have been made; but I venture to think that, in proportion to the difficulties which have had to be solved at the hands of the physician, medicine pure has made a progress as great as that which has characterized the sister art of surgery, or, indeed, any other art in which science has been brought into practical application. Consider how difficult are the problems which disease presents; the complexities of organic life; the many peculiarities and tendencies of each individual man; the inherited liabilities; the subtle influences of habit, of diet, and of climate; and those social and moral forces which exercise so great a power on the varying conditions of civilized life; and then say whether it can be expected that we shall be able readily to arrive at grand generalizations on disease. In the great progress which has been made during the past fifty years, we have the strongest possible indication of increased progress in the future. The labors of each generation will correct some errors of the preceding one, and will carry us somewhat nearer to the truth; but the temple of medical science can never be crowned. Each addition to our knowledge will but point out to us fresh fields for labor—new subjects for investigation; and we may rest assured that the demands which will be made on the practitioners of medicine will ever be increasing, as it shall become more apparent how intimately their labors, and the sciences on which medicine depends, are associated with the well-being of mankind.

And there is, I think, a favorable circumstance in connection with our profession at the present time which is likely not only to have a beneficial influence on its actual advance, but with reference to the estimation in which it will be held by the public at large. Resting, as it does, on a basis of scientific observation, and depending for its progress on scientific researches, it will meet with more and more recognition in proportion as it appeals to a public which is more and more scientifically educated; and we now see that physical science is assuming, more and more, its proper position in the education of the young. While I would express a hope that, in the general education of the people, and especially of those who are in the higher walks of life, the cultivation of literature in its widest sense will always maintain a due prominence, I trust that the movement which is now so perceptible, with regard to the teaching of physical science, will continue to meet with that support which I think it so fully deserves; and in connection with this subject I cannot but express the satisfaction which I, and I am sure I may say we all, have felt in seeing rise up, in the various great centres of population in this kingdom, those institutions for higher education which add so much to the teaching power of these centres. The movement is really a comparatively recent one, and we in Liverpool were somewhat backward in it; but a few years ago, some of those who had long felt the want which existed, determined to make a strenuous effort to give to this city what Manchester, Birmingham, and other cities had already provided for themselves. Relying on the liberality of the public of Liverpool, an appeal was made for the foundation of a college in which the higher branches of the arts and sciences should be taught. That appeal was largely responded to, and now I see in our midst a college, with a staff of professors, which I trust is destined to do a work which will reflect honor on itself, and credit on those who founded it. It is true that, as yet, the organization of the institution is not complete, and that a further sum of £50,000 is wanted, in order that the full advantage of affiliation with the new Victoria University may be reaped. But we are sanguine that this amount will soon be forthcoming, and that the position of equality with Owen's College with regard to university degrees will be assured.

The School of Medicine, so long known in connection with the Royal Infirmary, has now become the Medical Faculty of the College.

Since we met in Liverpool, as I have already said, nearly a quarter of a century has elapsed; and by the gaps which time has made in our ranks, and the fact that the Association is now reassembled here, we are reminded, that while individuals pass away, societies and communities may remain. I trust that the time is far distant when our society will show any symptoms of degeneracy or decay; but in its very magnitude and its great prosperity there exists an element of danger. I have, however, the strongest possible conviction that the wisdom of the Association guiding and directing its executive body, which shall be at once the representative and the reflex of the whole constituency, will conduct the society safely through the dangers and difficulties which may beset its path. United, we are all-powerful. Acting in unison, and animated with one feeling for the progress and well-being of our profession, there is no subject in connection with its scientific, its political, or its social aspect which we may not grapple with, and grapple with successfully. As year by year rolls on, we may hope that our numbers will increase, until at length it shall be a very exceptional circumstance in this country for a member of our calling not to belong to the British Medical Association. In concentrating, as we may then be able to do, the whole force of the body medical on any given object, we shall exercise a power which may either compel nature to reveal her innermost secrets, or influence a government in the legislation of the state.

But time warns me that I must bring my remarks to a close. Looking to the results which have been achieved, I feel warranted in saying that, with our present advantages, and working from our present standpoint, we have every reason to believe that the progress of medicine in the future will be marked by more rapid strides than those which have characterized it in the past; and, standing here to-night, I can look forward, with confidence, to the time when a future president of the Association, inaugurating the centenary of its birth, shall speak with triumphant voice, and in glowing language, of the advances which our profession shall have made. He shall tell of improved methods of research, and new instruments of diagnosis. He shall speak of the important generalizations which the collective investigation of disease, carried on for fifty years, has led to. He shall point to the greater facilities with which the differentiation between functional disturbances, and the early symptoms of organic disease may be effected. He shall, perhaps, be able to show how many affections which ultimately lead to great alteration of structure, and eventually to a fatal issue, have their origin in functional disarrangements neglected in their beginnings, and gradually inducing changes which at length become irremediable; and thus he shall show how closely physiology and pathology are connected. He shall, perhaps, be able to point to the establishment of the true pathology of those diseases which from recent investigations appear to be dependent on the presence of micro-organisms, of tuberculosis, and other allied affections, and, as a result of this, he may possibly tell that, by the adoption of a practice analogous to that which has had so marked a result in reference to splenic fever and chicken-cholera, and which has rendered famous the name of Pasteur, an almost complete immunity is enjoyed from those terrible maladies which have hitherto in large measure baffled the skill of the most accomplished physicians.

And, gentlemen, among the many changes which, I venture to think, these revolving years will bring, may we not hope, that, with the higher status as a science which medicine shall have attained, and the higher estimation in which the profession shall be held, will have come a fuller recognition of the claims of its members to some of the higher honors of the State, and perhaps the president of that occasion, or some of those who may listen to his words, may belong to that upper branch of our legislature to which hitherto no practitioner of art

has reached. The votaries of medicine want no other encouragement than that which comes from advancing their own science to stimulate them to the highest exertion for the general weal, but it cannot be doubted that both in the interest of the public, and in reference to the promotion of the health and well-being of the people, the presence of medical men in the House of Lords would strengthen the powers of that House and beneficially influence legislation.

But if the results to which I have alluded, and the advances which I have ventured to foreshadow, are to be realized, if medicine is to be raised from the region of empiricism, and to be placed on a higher scientific level, and if we in this country are to take our part in the researches by which the great problems now awaiting solution are to be determined, then must all unwise legislative restriction on the work of the physiologist and pathologist be withdrawn; then must all measures which fetter the action of the original investigator be removed; and I trust that, by the labors of the society which has been established for the cultivation of medicine by original research, a more enlightened public opinion will be formed, which will aid in bringing about these results.

Medicine must more and more proceed on the lines of exact observation and careful scientific inquiry; and in connection with this it is satisfactory to know that one of our great guilds is about to devote a portion of its means to the encouragement of work such as I have referred to; and I trust that our own society will be able yearly to devote larger sums than at present to a like cause.

And now, gentlemen, in conclusion, permit me, in the name and on behalf of the local members of the Association, to bid you all a cordial welcome to Liverpool. Our Association is now so numerous and so powerful, its meetings offer so many features of interest and attraction, that, wherever they may be appointed to be held we look forward with confidence to large and influential gatherings; but we desire that this meeting shall not only be successful in a scientific and professional point of view, but shall also be rendered interesting and agreeable to all who may honor us with their presence. We cannot show you grand architectural monuments mellowed by age and famous in the annals of history, such as characterize our metropolitan towns; we cannot take you to classic halls like those which give so great a charm to the visits which we pay to our university cities; but we trust that in traversing the different parts of this great centre of commerce, and in visiting the docks which line the shores of the Mersey, you may see something that will interest you; and that when your temporary sojourn among us shall be over, you may feel that, not only have you assisted at a successful anniversary of the British Medical Association, and contributed to the promotion of those objects for which it was founded, but that your visit has been one of satisfaction and of pleasure.

THE CHLORAL HYDRATES.—Mr. Joseph Bemrose, Lecturer on Practical Chemistry in Bishop's College, states that what is usually prescribed as croton chloral is really a butyric chloral. He says: To show clearly the relation existing between the acids—acetic, crotonic and butyric—and their aldehydes and tri-chlor derivatives we may formulate them as follows:

	Acid.	Aldehyde.	Chloral.
Acetic.....	$CH_3.COOH$	$CH_3.COH$	$CCl_3.COH$
Crotonic....	$CH_3(CH)_2COOH$	$CH_3(CH)COH$	$CCl_3.(CH)_2COH$
Butyric.....	$CH_3(CH_2)_2COOH$	$CH_3(CH_2)_2COH$	$CCl_3(CH_2)_2COH$

The hydrates of the first, $CCl_3\ C\ (OH)_2\ H$., and of the third, $CCl_3\ (CH_2)_2\ C\ (O\ H)_2\ H$, of these chlorals only are in use in medical practice; and although this has been pointed out many times since 1876 we still find the latter more frequently prescribed by the wrong name, croton chloral hydrate, than by the right one butyric (or butyl) chloral hydrate.—*Canada Medical Record*, February, 1883.

ON THE AUTONOMOUS LIFE OF THE SPECIFIC INFECTIONS.

BEING THE ADDRESS IN PATHOLOGY DELIVERED BEFORE THE BRITISH MEDICAL ASSOCIATION AT LIVERPOOL, AUGUST 3, 1883,

BY CHARLES CREIGHTON, M.D., M.A.
LONDON, ENGLAND.

MR. PRESIDENT AND GENTLEMEN: I have unusually good reasons for prefacing my address with an apology. I cannot claim to speak from the fulness of experience which has given so much value and distinction to the addresses that have been delivered before the Association, and I have a subject assigned to me which demands experience and a mature judgment in no ordinary degree. Pathology is a growing science, its aspects are constantly changing, a single year's work brings us a multitude of new and often puzzling facts; and although the issues are of the most momentous kind, not even the wisest and most judicial minds in the profession can always see their way to a clear and definite opinion.

But, amidst all this uncertainty, there is one central and guiding principle in the doctrine of disease which we may hold fast to. It is the physiological principle, or the idea that diseased states of the body are but modifications of healthy states, deviations from the beaten track, perturbations of the normal life, shortcomings of the physiological standard. Thus, even in so formidable a malady as diabetes, we are still within sight of the line of health; there may be a physiological glycosuria; and that fact, as Dr. Bence Jones says, proves to us that the disease is only a little way distant from health. "Here, as elsewhere," says that eminent chemist and pathologist, "there is no definite limit where health ends and disease begins." To find the proper physiological analogies for diseased processes is the task of modern pathology; and I do not think that there is, in the whole range of science, any better kind of intellectual exercise than to expose the working of the ordinary laws of structure and function under the mask of disease. The physiological idea is, indeed, the hope and inspiration of pathological science, as it is also of medical practice. But there is no reason why I should attempt to say again what has so often been well said before. Members of the Association who heard Professor Michael Foster, at the Cambridge meeting, discourse on the "Relations of Physiology to Pathology," will not have forgotten how he proved that the difference between these two sciences was merely a superficial difference, whether as regarded method or subject-matter. We shall, most of us, also recall Professor Huxley's lucid exposition before the International Medical Congress, of the "Connection of the Biological Sciences with Medicine," wherein he showed that pathology was that branch of biology which concerned itself with perturbations of the normal life.

That view of pathology is one that we all share; and as I have endeavored, according to my opportunities, to work out physiological analogies of disease in particular instances, I shall not be suspected of any want of sympathy with the general principle. But I am none the less confronted with the difficulty that a great deal of pathology appears to be quite different in kind from any physiology known to us. What are the physiological analogies of the infective and constitutional diseases, and how large a part of pathology do the diseases of that class stand for?

There is, I believe, a serious difficulty here, and a difficulty that made itself felt in the very first system of physiological medicine that was given to the world. Broussais was the author of the first attempt at a physiological scheme of disease; and it was only a year or two ago that Professor Charcot was claiming for his brilliant countryman the credit of having broken down the dualism of health and disease, and of having eradicated that old and pernicious habit of regarding disease as a separate entity. But Professor Charcot said no-

thing of the rock on which Broussais is generally accounted to have made shipwreck. The author of the first physiological medicine was thorough-going, and it was because he endeavored to be comprehensive and consistent that he failed. He left out no great disease from his physiological scheme, not even typhus nor Asiatic cholera; they were all perturbations of the normal life, and a good many of them were forms of gastro-enteritis. Professor Charcot may be right in claiming the physiological medicine of Broussais as the example for all subsequent times; but it is quite certain that it served also as a warning to those who next took the physiological medicine in hand. They were careful to lighten the ship by throwing overboard Asiatic cholera, typhus fever, and, in fact, the whole of the acute and chronic infections. Just about the time when the thorough-going system of Broussais had provoked the inevitable reaction, Professor Henle had made his suggestion about minute parasitic organisms being the causes of the specific infective diseases; and it is curious to read, at a distance of forty years, in the first volume of the German *Archives of Physiological Medicine* (p. 88), how Griesinger, one of its sponsors, promptly availed himself of the parasitic hypothesis of Henle in order to account for all those diseases which had been prudently omitted from the physiological programme.

But I venture to say that, when we congratulate ourselves upon the physiological basis of pathology, we do not always reflect how much of disease is thus excluded from the class of disturbed physiological processes, and how small a fraction remains to fill the physiological categories. There are several passages in Sydenham's works in which he gives his estimate of the proportion that the species of disease—the *morbi typo induti*—bear to the rest; he estimates diseases of a specific type at two-thirds of the whole; and it will be admitted, I think, when we look abroad as well as at home, and we read history as well as contemporary records, that this estimate shows his fairness of mind and his sense of proportion.

The serious difficulty, then, which I spoke of—the difficulty that must have been present to the mind of Broussais, and must occur more or less to every one—is that a physiological medicine, which leaves out the larger and more formidable half of disease, is hardly worthy of the name. The doctrine that morbid processes are after all merely perturbations of normal processes, or, as Hunter said, "a perversion of the natural actions of the animal economy," is the great principle of scientific pathology; but we shall have to speak less enthusiastically of it, if it should appear that it has no place for the long list of infective diseases—for plague, for cholera, for yellow fever, for typhus, for small-pox, for leprosy, for syphilis, for cancer, for consumption. If the physiological idea is to be good for anything, it ought to be good for those; for they are the real difficulties of pathological science, and the real *opprobria* of the medical art.

I am sanguine enough to believe that the physiological doctrine will one day be shown to be as large in its application as it is rational and hopeful in its spirit. It is for that reason that I have decided to use this public opportunity that has come to me—and come to me most unexpectedly, and, I feel, most undeservedly—in order to speak of certain aspects of the specific infections, which are perhaps not the aspects most commonly brought before us at present. One would wish to think of these diseases, strange and terrible though they be, as still joined in continuity with the common disorders of structure and function; and I am accustomed to express for myself this connection by a formula, which has no other value than belongs to a mode of thought or a form of words, but may still serve as a convenient or empirical standing ground for those who seek to observe a certain unity and sequence in their study of disease.

I shall endeavor, then, to discover some relation between common aberrations of structure and function and the specific infections, or a relation between disordered states of the body and the self-existent species of disease; and I shall make this attempt with two or three representative instances. It will be convenient to begin with cancer, for the reason that the suggestions that I have to make arise most naturally out of the study of cancer.

Cancer is an infection, although its infective power does not extend, except in heredity, beyond the individual body in which the disease takes its rise. I do not forget that some pathologists consider cancer to be no more than an overgrowth of epithelium. But we shall find it difficult to explain to a patient with cancer that he is suffering merely from an overgrowth of his epithelium. All the world knows what cancer is, and no microscopic analysis will ever persuade men that cancer is anything but the devouring thing, the implacable enemy that the common eye sees it to be. What the microscope does show us, is that a cancerous tumor has not always been cancerous. If we take any of the common seats of cancer—the stomach, or the uterus, or the breast—we shall find that the disease may be traced back to a point at which it comes within the category of structural and functional irregularities. I say structural *and* functional, because it seems to me that if we attend only to the structural features of the disorder, as some of our German colleagues are content to do, we are likely to miss the central idea of the deviation from the normal. In the favorite seats of cancer, the secretory function is not always or altogether what we often take secretion to be. Under certain circumstances, solid products, or cells, form part of the secretion, and those cells do not always get carried off, as the cells do in an ordinary catarrh, by discharge from the surface, or by way of the lymphatic drainage, but they may stagnate and accumulate in the deeper textures of the organ or part. So far, there is nothing in the morbid process for which we may not find close physiological analogies. In some of the secretions of the invertebrata, and even in certain glands of the higher animals, the secretion retains its solid or cellular character for a considerable time. Again, the heaping up of the solid or by-products of secretion, in the spaces of the underlying connective tissue, is found to occur in the breast as a perfectly natural incident.

Still further, the free space of a gland may become filled with cast-off epithelial cells; or the epithelial lining may be raised into wart-like growths. Even a whole gland, like the breast, or a whole lobe of the gland, may be uniformly affected in the way of overgrowth, producing an adenomatous condition, or the condition of simple glandular tumor. There is nothing cancerous in all this; we are still within sight of the line of health. The cancerous element comes in usually after a particular time of life, and it consists in the implication of other tissues than the glandular or secreting structure, whose irregularities were the exciting cause. Epithelial cells that have not been used for secretion can become mischievous as infecting cells, and if we now examine the region of disease, we shall find the marvellous spectacle of an epithelial kind of structure springing from the tissues around, where there is no epithelium naturally; a little later, the same epithelial pattern is, as it were, carved out of the parenchyma of lymphatic glands, or of the liver, or in the deeper layers of the skin, or even in still more unexpected places. The pattern of this widely distributed structure is always the same in a given case, and there is always something in it which reminds us of the primary seat of glandular disturbance. An intelligible disorder of structure and function, not without its close analogies in physiology, has acquired a kind of individuality or independence, and a power to reproduce itself throughout the body; or, in other words, it has become a ravaging cancer.

I shall not delay here to go into the particulars of this extraordinary process, or to enter upon controversial

matters. I take cancer as a striking instance of a disease which may be traced along the track of physiological perturbations for a certain distance, after which it becomes what all the world knows it to be—a semi-independent life, an *imperium in imperio*, a power inseparable from the general life of the body, compatible even with blooming health for a time, but in the end sure to gain the mastery.

In taking a full and fair view of cancer, of its physiological beginnings, and its ultra-physiological course, we cannot but admit that there is some truth in that hard saying of Paracelsus: "In such a disease, a man is himself and another, he has two bodies at one time, enclosed the one in the other, and yet he is one man." This kind of Platonic mysticism is not what one would choose to import into exact science. But we are bound by a regard for facts; and I do not see how the facts of cancer, whether they be microscopic or clinical, can be done justice to unless we admit that a state of the body may be raised to the power and dignity of a life of semi-independence. I purpose speaking, in the sequel, of this semi-independence under the name of autonomy; and I shall endeavor to show, in the case of two or three other representative infective diseases, how a perturbation of the physiological life has acquired its autonomy, or what the pre-autonomous stage of those infections may have been. This doctrine of acquired autonomy and the pre-autonomous stage is the formula in terms of which I would express the relation between ordinary perturbations of structure and function and the specific infections, the relation between disordered states of the body and the self-existent species of disease.

If cancer has always been the great popular instance of a disease enjoying a kind of life of its own within the body, consumption hardly yields to it in its relentlessness, and it far exceeds it in its prevalence. Is it possible, in the case of consumption, to show that a wasting infection has arisen out of common disturbances of the physiological life? Before so critical an audience, I shall not have the hardihood to speak of consumption in general—of the disease about which so great masters in pathology as Laennec and Virchow have differed widely. But there is a form of tubercle, the bovine form, in which the facts are much less ambiguous, and much easier to deal with, and, as it happens, more familiar to myself; and for bovine tubercle, or, as it is sometimes called, the pearl disease, I shall venture to inquire whether the small beginnings of it may not be found in a certain kind of disturbance of ruminant nutrition, just as we find the pre-cancerous stage of cancer in certain irregularities of the apparatus and process of secretion. Those beginnings would correspond to what I have called the pre-autonomous stage; while the autonomous life of the disease, as a semi-independent thing, would be shown in its infectiveness.

Bovine tubercle is a more complete example of infection than cancer. It is a constitutional disease, pervading the whole body; it is likely to end in wasting and cachexia; it is very liable to be inherited by the offspring; it can be given to other animals, by inoculation or by feeding, in experiments, and probably also by accident; and there are recorded cases, in veterinary practice, which lead us to think that it hangs about a stall, or spreads from stall to stall by volatile contagion. There is, in fact, no disease, in human or veterinary pathology, that shows a more complete autonomy; it is constitutional, hereditary, infective, and contagious.

The pearl disease is peculiarly a ruminant malady, and it is curiously limited within the ruminant order itself. It does not occur in the sheep, nor, as far as we know, in the deer; and by far the larger number of cases are found in the domesticated bovine species, in which it is, indeed, much too common. I have been on the outlook for specimens of it among the animals that die in the Zoological Gardens in London, and my experience hitherto has been curious and suggestive. I have hitherto found the peculiar anatomical characters of this form of tubercle in only three species: the eland, a large South African antelope, like a cow; the nil-ghau, a large Indian antelope, whose name means "the blue cow;" and the prong-horned antelope, from America, another of those half-way animals between the bovines and the antelopes, which the late Mr. Forbes, the prosector at the Zoological Gardens, took much interest in as a transition species. It is certainly a remarkable thing that those antelopes, which resemble the bovines so closely in zoological characters, should resemble them also in their liability, under confinement, to a distinctive kind of new formation. This kind of tubercle is not only an affair of the ruminant order, but it is an affair of a small group of ruminants, mostly belonging to one genus.

What, then, are the distinctive anatomical characters of this distinctively ruminant disease? The morbid anatomy of bovine tuberculosis has been written with as little reference to theory or preconceived opinion as could be wished. It has been, in great part, observed by those whose business lies with cattle; and the popular names of the disease in all countries will show us how it has presented itself to the common observer. The various names show that it is primarily an affection of the serous membranes; the Germans have called it the "pearl disease," from the rounded whitish nodules attached to the abdominal and thoracic surfaces; the French have named it "pommeliere," from a fancied resemblance of the nodules to clusters of potatoes; in England, it has been called "the grapes;" and, in Scotland, "angle-berries." I am merely repeating the language of all authorities, including Professor Virchow, when I say that the disease is primarily one of the serous membranes—a growth of multiple nodules, usually small and flattened, often suspended by a stalk, and sometimes as large as a cherry or an apple. These are the beginnings of the disease; but it extends from the serous membranes, by infection, to the lymphatic glands, which become changed into the same mortar-like substance that is found in the degenerated nodules. The lungs, also, are very apt to get infected, as they so often do with new formations of a sarcomatous nature; and the infection may, in the end, reach most of the organs, as well as the bones and joints, causing the animal to die of general cachexia and wasting.

Such is the usual sequence of events where the disease is originally acquired; but in the cases of inheritance—and these are now estimated at more than one-half—there may be some departure from this order; in them, the formations in the lymphatic glands, lungs, and other viscera, may be more conspicuous than the serous-membrane nodules; but even in the inherited disease, the pleural or peritoneal surfaces will usually show characteristic traces of the primary new formation. Some allowance must be made for certain modifications in the order and distribution of the disease, when it is communicated directly to the offspring by a sire or dam which had acquired it; and it is all the more necessary to be clear on this point, since, at the present day, the hereditary taint would seem to be so widely distributed throughout the bovine stock as to obscure somewhat the original characters of the disease. In what I have to say, I must speak of the disease as it is primarily acquired, and as it is described in the earliest writings, and by its popular names.

It starts, then, as a multiple nodular condition of the abdominal and thoracic serous surfaces, it acquires the character of a constitutional disease, it goes all through the body, it passes directly to the offspring, it may be inoculated upon healthy animals or communicated to them by feeding, and it is not improbable that it passes by volatile contagion. The infectiveness within the original body, and the faculty of passing to other animals, is what I would call its autonomous life, and I would look for its pre-autonomous stage in the peculiar groups

of multiple nodules on the serous surfaces. What then is the origin of these nodules, in what relation do they stand to any known disorders of ruminant nutrition, or, rather, of the nutrition of those ruminants that are closely confined, artificially fed, and over-milked?

I am not aware that the suggestion which I have to make has occurred to any one before, and I put it forward, therefore, with some diffidence. This suggestion arises out of a consideration of the forms and favorite seats of the nodules, and of their structure, and degenerations. One cannot help observing that these multiple nodules are especially apt to grow in the seats of fat-formation, and to assume the external form of deposits of fat, either the stalked and pendulous form, or the flattened form of confluent lobules or patches. Now the bovines are somewhat peculiar in the way in which they lay on fat. They have not so much of subcutaneous fat as the sheep or the pig, but they are very apt to have internal formations of adipose tissue, sometimes in situations where one would imagine that it could serve none of the ordinary purposes of fat. Besides the common deposits of fat about the abdominal organs and in the thorax, there may be lumpy masses of it even on the pleura covering the ribs, and on the diaphragm; and, in highly fed animals it is not unusual to find a lobulated layer of the same tissue all over the surface of the spleen, and even on the surface of the liver. It can hardly escape us that those serous surfaces which are invaded in the course of this excessive fat-forming habit, are just the localities where the pearl nodules are found. There is, indeed, one rather important exception to this rule, namely, the borders and surfaces of the lungs. I cannot say whether a border of fat ever occurs round the margins of the lungs in cattle, as it occurs round the spleen and liver, or under the pulmonary pleura, as it is found under the costal pleura; but, if that should be the case, the analogy with the pearl disease would be complete, so far as situation goes; otherwise, we must explain the nodules of the pulmonary pleura on the hypothesis of secondary infection. As regards form, the resemblance between the physiological and the pathological formations is most striking; in both cases we may find either a finely lobulated stratum of translucent tissue, or coarser lumpy masses, or pendulous nodules.

But, after all, the diseased nodules of the serous membranes are not fat, or, at all events, they are not composed of adipose tissue throughout most of their extent. They are not multiple lipomata; but it would be strictly correct to describe them as multiple fibromata, or sarcomata, with a deficient blood-supply, or rather as a multiple tumor-formation, containing a mixture of those two kinds of tissue, growing in the seats of fat-formation, and assuming the lobulated, or lumpy, or pendulous forms of the sub-serous fat.

I do not think that I have gone beyond the facts in this statement of the naked-eye characters of the primary new growths to which the bovines are so liable, and I cannot help thinking that there must be some connection between them and vicissitudes in the nutrition of those animals as manifested in that tissue which would be most affected in nutrition, namely, the fat-tissue. The facts may be explained in two ways, both of which may be applicable, although I would regard one of them as more probable than the other. Either the formations on the serous membranes are atrophied or degenerate masses of fat in which the blood-supply has failed to a great extent, or they are radically new growths which have sprung up in the old lines of fat-formation, or where fat may once have been. The description in a veterinary text-book of retrogressive clauses in the multiple lipomata of the serous membranes, reads very much like a description of some of the bovine tubercles that we meet with; the oily contents of the fat-cells disappear, the connective tissue hardens and thickens, calcareous matter is deposited, and a mortar-like substance takes the place of what once was fat. But there is another and perhaps better way of accounting for the fact that the morbid growths are found in some of the favorite seats of the internal fat, and in its peculiar shapes. It is a well-known zoological characteristic of the bovines that their fat is naturally apt to come and go from time to time, in the wild state according to the periodicity of the seasons, and in the domesticated state according to a multitude of artificial practices in the management of dairy and farm stock. Nothing can be more artificial, for example, than the conditions which cows in town dairies are subjected to: the close confinement, the unnatural feeding, and the excessive milking. It is quite conceivable that an animal, under those circumstances, and more especially when it is growing old, would depart from its natural fat-forming habit, and put on, instead, an embryonic kind of tissue, which is neither fat nor anything else of a physiological kind, although it occupies the old seats of adipose tissue, runs into the familiar mould, as it were, and grows to the old pattern.

Whether we take the one explanation or the other, or the two together, there is, I think, a pretty strong chain of evidence that bovine tubercle begins as a disorder of nutrition. It is oftenest acquired by animals that are farthest removed from their natural conditions—by cows imprisoned in town dairies; and the disease that those animals are so peculiarly liable to begins as a kind of multiple morbid growth, which occupies the very seats of the internal fat, and runs into its very shapes. Now, the abdominal and thoracic fat is precisely the tissue that might be expected to show the effects of malnutrition in the way of structural changes. The tubercles are simply collections of embryonic tissue in which the formation of blood-vessels has been inadequate, and in which degeneration has inevitably followed; and any one who has studied the development of fat will readily admit that the same embryonic cells growing in the particular localities might have become fat-cells if the blood-supply had been sufficient.

Whether I have indicated truly or not the circumstances in which we should seek for the beginnings of this peculiar kind of new growth, I am confident, at least, that we must look for these beginnings in some physiological disorder or other within the small group of ruminants, and not elsewhere. Disordered nutrition appears to me to be able to account for this kind of multiple tumor disease, just as I believe that disordered secretion can account for the beginnings of cancer. Disordered nutrition shows itself in various ways within the body; but there is only one tissue that it specially affects, and that is the adipose tissue, just as the glandular tissue is the proper seat of secretory disturbances. In the one case as in the other, the disorder of function finds a structural expression; it acquires length, breadth, and thickness; or, in other words, it results in a tumor. The functional disease thus acquires the degree of individuality which may be ascribed to a tumor, and that must be the beginning of its life of semi-independence within the body. In both cases, the pre-autonomous stage is a common disorder of structure and function—of secretion in the one case, and of nutrition in the other; and each goes on to acquire the mysterious power of infection. But they become autonomous in different ways, or under different circumstances. I have already spoken briefly of cancerous infectiveness, and I have elsewhere endeavored to trace the connection between it and the antecedent glandular disturbances. In bovine tubercle, I should ascribe the infectiveness to the *multiplicity* of the primary nodules, and to the fact of their being seated on the serous membranes, which are so fundamental a part of the lymphatic system. Multiple tumors of the serous membranes are favorably situated for infecting the lymphatic glands, and the infection of the lymphatic glands is only the beginning of an autonomous career. Professor Virchow has shown, in his great work on morbid growths, how the lobules of abdominal fat may become multiple stalked lipomata, each lobule becoming a

kind of individual tumor and growing as such; and he adds the following remarkable words: "There is no doubt that this kind of multiplicity does not differ altogether from what we find in malignant tumors or in an infective dyscrasia;" and if that can be said of multiple lipomata still retaining the proper structure and nutrition of fat, it can be said, with even greater truth, of those multiple growths of the abdominal and thoracic surfaces which we have good reason for taking to be rather the degenerations or substitutes of the fat.

There is one other point to be noted in connection with bovine tubercle. It may or may not be primarily due, as I have supposed, to an error of nutrition in the abdominal and thoracic deposits of fat, but its morphological characters are certainly peculiar, and they belong, in a sense, to the bovine organization. If I may so speak, it has sprung out of bovine soil, and the marks of its bovine origin never quite leave it, even when it is set up in the bodies of animals widely removed from the ruminants. A mere condition or state of the ruminant body can be abstracted, as it were, from all other ruminant conditions, and made to live in another body; and that is an extreme instance of what is meant by the autonomous life of the specific infections, or of the semi-independent existence of the species of disease.

Having presented cancer, and one of the varieties of tubercle, in this light, I shall next inquire whether the formula of an acquired autonomy may not be applied to a third great disease, representative of another class of infections, I mean small-pox. Small-pox may be looked at from more than one point of view without losing sight of its main features. Our great English dermatologist, Willan, looked upon small-pox as a skin disease; but Willan was also one of the first to investigate the history of small-pox epidemics throughout the world, and he was not likely, therefore, to underrate its importance as a pestilence. Hebra also ranks small-pox among the cutaneous disorders, and the authorities of the Allgemeine Krankenhaus at Vienna have given practical effect to Hebra's doctrine so far as to place the small-pox wards under the department for diseases of the skin; and I can testify, from an experience of the Vienna small-pox wards, that the disease does not lose any of its contagious power by being classified among skin diseases. An experience gained under those circumstances is apt to make an impression, and, from that time, I have never quite been able to think of small-pox except as an ill-smelling condition of the human skin which one person may impart to another. It is a skin disease which has been reproduced with the greatest accuracy and fidelity in millions of copies for hundreds of years, and the extraordinary closeness of the mimicry has given rise to the opinion that the disease is really the uniform effect of some unknown poison. But the anatomical structure and evolution of the pock is too elaborate to be the simple and direct effect of an intrinsic poison; it is not like a flea-bite or like the nettle-rash which comes out in some peculiarly constituted persons after eating shell-fish, or, as I have known, even from eating a single wholesome strawberry. The pock is a complicated affair, and there is a history written in it, a history of characters acquired bit by bit, as in the evolution of living things, a history which has been transacted within the body; and the stages of this history are run through with more or less completeness in every case of the communicated disease. The papules had developed fluid in their summits, they had grown in a peculiar way to the breadth, the original centre had become a distinct depression, and in the course of this evolution certain partitions had been formed in the interior of the pock. Further, the pock is more deeply rooted in the skin than most skin diseases known to us; for its base goes down to the vascular layer of the corium, and, when it scabs it leaves a considerable defect of substance (more particularly in those localities such as the face, where the vascular layer of the corium is well developed), a peculiarity among skin diseases which can hardly be matched unless it be in some of the tropical forms of "impetigo." This skin disease is ushered in by much constitutional disturbance or fever; and, as in some other skin diseases which are not contagious, the fever abates when the eruption has come out, and the subsequent constitutional disturbance is exactly in proportion to the number of the pocks.

The remarkable thing is that all this complex of anatomical structure, of stages of evolution, and of characteristic fever, should have preserved its unity and individuality through so many transmissions, in all sorts and conditions of men, and in all parts of the world. The disease possesses what I would call autonomy in a high degree, and, from that point of view, it becomes a matter of no ordinary interest to inquire into its pre-autonomous history.

Professor Hirsch, in his "Handbook of Geographical and Historical Pathology" (a work which we are soon to have in an English dress), concludes an elaborate review of the historical evidence about small-pox, with the opinion that we have to go to tropical countries, to Hindostan and to the interior of Africa, for its original seats, and to go back to a remote antiquity to find the beginnings of it. Lichtenstein, one of the early explorers of Africa from the southern end, found small-pox to be prevalent wherever he penetrated to, and he found it among tribes who professed to have got it from nations still farther from the sea. According to Pruner, the disease is peculiarly an African disease. We may take it, therefore, that small-pox was originally a disease of the black skin, and it is in keeping with that historical and geographical induction to find that the black-skinned races are by far the most susceptible of the disease even nowadays, when it is set up only by contagion.

It is impossible to speculate to any purpose on the rise and development of small-pox out of some common and frequent disorder of the black skin under such influences as tropical heat and moisture, or under the peculiar conditions which obtain among the swarming populations of tropical countries. One naturally thinks of a complex form of "febrile lichen," a skin disease which Dr. George Gregory admits that he could not always diagnose from small-pox; and if we imagine a widely prevalent kind of febrile lichen to follow somewhat the same development that Willan describes in a remarkable case of lichen agrius, we should have a not very remote analogy for what I should call the pre-autonomous stage of small-pox, both in the structural characters and in the constitutional fever. We are, at least, justified in thinking of some form of tropical skin disease, widely spread within a certain zone, very apt to recur in the individual, and with each recurrence to become more inveterate and to develop a more complex structure. Given a number of people suffering from such a cutaneous disorder at one time, and some great migration or invasion, and we shall probably have the circumstances under which the skin disease would become communicable, would pass by contagion to the skins of those who had never incurred the disease by natural causes, and pass all the more easily to them if they belonged to an entirely different race, or presented the ordinary contrasts of civilization and barbarism, of white skin and black.

I do not say that it is an easy thing to construct the circumstances under which this disease of the black skin acquired, what I would call, its autonomy. It was probably a gradual process; its semi-independence must have been hardly won and slowly consolidated, until, at length, it was ready to start on its devastating campaigns. Small-pox has been a disease on so stupendous a scale that it must seem to be mere hardihood to speak of it as a condition of the skin, originally acquired in the tropics, which has been passed on from one body to another. But, even if history and geographical distribution had told us nothing, the loathsomeness, the peculiar odor, and the no less peculiar scars of small-pox, might of

themselves suggest another skin than ours; and I have seen too many instances of the minute mimicry that goes with every infection to feel any surprise that a disease which is native under a tropical sun should impress upon its victims in every country something even of the primary ethnological characters.

And now let us compare the autonomous disease, as we know it, with the original skin disease out of which it must have grown. The contagious small-pox is distinguished by what Sir Thomas Watson calls "the very curious fact" that it generally occurs but once in a person's life. "In this," says Watson, "the contagious disease offers a remarkable contrast to inflammations, which, having happened once, are, for that very reason, more apt to happen again;" and he goes on to show the impropriety of ranking small-pox under the head of cutaneous diseases; it would "more rightly be called a blood disease." But there need be no antagonism between the view of small-pox as a cutaneous disease, and the view of it as an infection. This formula of an acquired autonomy, and of a pre-autonomous stage, which I have been recommending as a sort of nostrum for our intellectual difficulties, appears to me to be a means of reconciling those antagonistic opinions which have arisen, not so much in connection with small-pox, as in the controversies about some other infective diseases, which are supposed still to develop *de novo* from time to time. Small-pox, in its pre-autonomous stage, would be precisely that kind of skin disease which, having happened once, is, for that very reason, more apt to happen again; it would recur in the same spots, as in the early stages of leprosy, and it would become more rooted and more inveterate each time it came back. The inveteracy of this morbid condition of the skin, due in part to neglect, would be its first step toward acquiring that remarkable power of semi-independence within the body, which I have been endeavoring to illustrate under the name of autonomy; it is this acquired power which enables it to pass to another person's skin as an individual state of the body, which can be, as it were, abstracted; and its individuality is proved by the best of all tests of what constitutes an individual—the test of parentage; for the skin disease that springs up in the contaminated body is exactly like the skin disease which must have been originally acquired. But the infected or impregnated body runs through all the stages of the malady—papule, vesicle, pustule, scabbing, and scarring—in rapid succession in two or three weeks, and it is thenceforward done with that particular form of skin disease for ever. The autonomous form of the disease is a brief abstract and chronicle of its whole protracted development or evolution; it sums up the past, and just as it sums up the past, so it anticipates the future.

Small-pox appears, then, to be a clear case of a morbid condition of the body, namely, a cutaneous condition, which has been enabled to lead a kind of independent life. But small-pox is one of those diseases that always pass directly from one body to another, and the direct succession of cases does not appear ever to have been broken. There is, however, another large class of infections, corresponding to Pettenkofer's division of the exogenous contagia, which are not only able to subsist for long periods outside the human body, but which even require a certain amount of external putrefaction in order to make them potent. Cholera is one great example of a disease of the exogenous group, and yellow fever is another; and I shall ask your attention for a few minutes to some facts relating to the latter disease; for here, at least, it must seem as if we had got quite away from common disorders of structure or function, and into an absolutely separate region of disease, where the physiological principle does not serve us.

Yellow fever is one of those maladies in which historical and geographical facts are of even greater importance than microscopic or chemical, and hardly less important than clinical; and, as I have been lately occupied in turning into English the German sentences of Professor Hirsch's treatise on "Geographical and Historical Pathology," I have had occasion to reflect upon the more salient facts in the history and geography of yellow fever. The first point that strikes one is, that it appeared in the seventeenth century as a new disease; for more than a century after the Spanish conquest of America, and for many years after the first English and French colonization in the West, there was no yellow fever, and, when it did come to Guadaloupe and Barbadoes, it was recognized as something quite different from the ever-present malarial fever. The next point is, that there is something quite peculiar in its geographical distribution. At the present day, we are apt to think of yellow fever as the fever of the Gulf of Mexico and Brazil; but it had been the scourge of Philadelphia, and even of New England, for many years before it broke out in New Orleans at all (1796); and its first appearance at Rio was in 1849. In reading Bancroft's treatise on this disease, published in 1811, it is curious to notice how much yellow fever has shifted its ground; it has always remained true to certain shipping-places in the West Indies, but the other great centres in Bancroft's time have absolutely ceased to be the seats of yellow fever; and some of the places that are among the worst seats of the fever now are not even mentioned in Bancroft's pages. In fact, it is not latitude and longitude that explains the peculiar distribution of the disease. There is only one thing that covers its history and its geography and the remarkable changes in its distribution, and that is the slave-trade. Disregarding its occasional and widely ranging excursions, and confining the attention to the localities where it is or has been, at one time or another, endemic or repeatedly epidemic, these are found to be the creeks and wharves and low shipping-quarters of the ports of debarcation of the slave-trade, together with a few much less endemic, but not less significant spots in Spain and on the west coast of Africa—the places to which vessels engaged in the contraband slave-trade had gone on their return voyage. The single exception to this curious rule is Peru; but Peru is hardly an exception, when we bear in mind the many points of resemblance between its coolie trade across the Pacific and the old African slave-trade.

It was an inquiry into the disastrous outbreak at Barcelona in 1821, in which five thousand persons died, that gave the first clue to the connection between yellow fever and the slave-trade. The circumstances were investigated by Dr. Audouard, for the French government, and the same physician was sent again in 1823 to inquire into a more limited epidemic at a small port in Biscay. The facts were very much the same in the two outbreaks; ship-carpenters, engaged in repairing vessels that had arrived some time before from the West Indies, were seized with a prostrating illness, which they attributed to putrid emanations from the bilge-water, and they became the first victims of an epidemic which proved to be yellow fever.

Dr. Audouard found that the vessel which started the infection in the 1823 epidemic was a slaver; and, on recalling the facts of the Barcelona outbreak two years before, he found that the two vessels chiefly concerned in it were also slavers, in proof of which, he said, they might still be seen with the irons for securing the slaves fixed in the planking of their holds. It was ascertained also that one of them had had an extraordinary amount of dysenteric sickness and mortality among her human cargo on the previous voyage. He calculated that about sixty Spanish vessels had been engaged in this contraband trade in 1820, that they had taken out about fifteen thousand slaves from Africa to the West Indies, and had returned to Spain with merchandise before going down to the African coast for their next cargoes. This was, in fact, the time of the irregular slave-trade, when the vessels were not adapted for it, and the crowding and sickness on board was at its worst; and this period corresponds to the remarkable outburst of yellow fever, both in

America and Spain and on the west coast of Africa, from about 1790 to 1820.

It is a perfectly well-known fact, admitted equally by Lind and Bancroft, that the slaves on board a slave-ship did not suffer from yellow fever, although they suffered much from dysentery and from what used to be called the "horrors of the middle passage;" so that a slave-ship would arrive at her destination with no contagious fever on board, but saturated with the filth of her human cargo. The facts discovered by Dr. Audouard in two Spanish outbreaks suggested to him a general theory of yellow fever; it was a peculiar form of typhus due to emanations from the putrid dysenteric discharges of the negro, and the fever owed its well-marked specific type to the fact that the matters which excited it could be traced to the negro body. There was something, he said, quite peculiar in the negro's constitution, and it was not surprising that the discharges from his sick body should be able, when fermented, to produce in others a typhus fever of a peculiar type.

Dr. Audouard's papers were communicated to the French Royal Academy of Sciences, and accepted for publication. The Academy, however, did not adopt his opinions, and they pointed out, after the manner of academies, that his facts related to only three slave-ships and to only two outbreaks. But the author had shown that a great part of the West Indian trade with Spain was carried on by ships engaged in the contraband slave-trade, and that the same circumstances which led to the epidemics investigated by himself must have arisen often at all the Spanish ports where yellow fever was an almost annual occurrence. Not only so, but the whole history and geography of yellow fever in America was on his side; seaports where cargoes of slaves had been landed year after year had presumably become saturated with the peculiar filth of the trade, and it is just the landing-places and shipping-quarters of those ports that are the foci of infection. In some of them, such as Vera Cruz, the poison seems to have become peculiarly fixed in the soil, so as to defy all attempts at getting rid of it. But in the great cities on the Atlantic seaboard of the United States, the fever was practically eradicated soon after the importation of negroes ceased. During the sixteen years after that date (1808), yellow fever appeared only seven times in the different ports of the Union, whereas in the sixteen years preceding the abolition of the traffic it had broken out fifty-eight times.

In the Spanish seaports also, the great epidemics of yellow fever are an almost forgotten tradition. But in Brazil they are of recent date, the first of them as recently as 1849, and Brazil was then and had been for some time the great market for the African slaves, when the ports of other countries except Cuba were closed to them.

A still more unlooked-for confirmation of Dr. Audouard's theory may be discovered in the establishment of yellow fever in the seaports of Peru within quite recent times; the first outbreak having been at Callao and Lima in 1853. An account of it was sent from Lima to the *Edinburgh Medical Journal* by Dr. Archibald Smith, who says: "The first cases of the Lima fever were vulgarly attributed to the excessively crowded shiploads landed at Callao of poor and sickly Chinese, who were ill-fed, ill-clothed, and badly cared for on the voyage from their native country. But," he adds, "I, as a practitioner, could not trace any symptoms of this fever to them." But Dr. Smith's objection to the popular explanation of the yellow fever in Peru is precisely the strongest argument in favor of it; the Chinese, like the negroes, did not suffer from yellow fever, and they are said, indeed, never to take it on shore; but they suffered from those dysenteric and other non-contagious ailments which were the antecedents of yellow fever. The disease, since that time, has appeared at various other ports on the Peruvian coast; its outbreak at one of them, in 1868, was so sudden that the populace attributed it to an earthquake; but a communication sent to the French Foreign Office more reasonably connects it with the Chinese immigration, which, as the report says, has profoundly changed the sanitary condition of the whole Peruvian coast.

But there is another argument for Dr. Audouard's theory, which he makes hardly any use of. It is the immunity of the negro from yellow fever, notwithstanding his great liability to cholera and the common forms of typhus, including ship-typhus. This immunity is perhaps not so striking now, when the negro blood is less pure, but all the earlier authors were much impressed by it. Thus, Doughty, who saw much of yellow fever in Jamaica at the beginning of the century, says: "In the natives of Africa the constitution appeared to me as secure against yellow fever as a person who has had the small-pox"—and he might have said the yellow fever itself—"is against its recurrence." Fenner, a more recent authority in New Orleans, says: "It is a well-established fact that there is something in the negro constitution that affords him a protection against the worst effects of yellow fever, but what it is I am unable to say." Mr. Clarke, the author of a paper on the "Topography and Diseases of the Gold Coast," in the first volume of the "Epidemiological Transactions," says: "I have heard and read of negroes taking yellow fever, but in no case did it happen at Sierra Leone during its prevalence in 1837, 1838, 1839, 1847; nor, so far as I understand, in 1859; and no example of it occurred to any of my medical brethren in the course of their practice." This is certainly a remarkable testimony, when we consider that ninety-nine hundredths of the population of Sierra Leone are negroes. And to show that this is the immunity of negro blood, and not of acclimatization, I take the most remarkable experience of all, that of the French expedition to Mexico from 1862 to 1866. There was a heavy mortality from yellow fever among the motley gathering of troops at Vera Cruz in the summer of 1866; not only the French soldiers, but Arabs from Algiers, Indians from the interior of Mexico, and Creole troops from the West Indies, were decimated by it; whereas, in a body of four hundred negro soldiers from the West Indies, there were only three cases, with one death; and in a black regiment of five hundred men, raised in the Soudan and Nubia, there was not a single case.

If, then, we put together the facts of this remarkable disease: when we consider that its advent into the world coincided with the rise of the slave-trade; that its habitat is or has been the ports of debarkation of the slave-trade, and those places in Spain and the West Coast of Africa to which slave-ships went on their return voyage; that its exacerbations have coincided with the most lawless period of the negro traffic; that it gained a footing in the ports of Brazil in 1849, when the slave-trade flowed into that channel; and that it has become endemic subsequent to 1853 on the Pacific coast of South America, in those parts of Peru which were the seat of an infamous coolie traffic—we can but see in all this concurrence of testimony a proof that Dr. Audouard was right in describing yellow fever as a peculiar form of typhus, originating in all its endemic centres in the filth of slave-ships, just as he showed that it had so originated, as a matter of fact, in two of the Spanish outbreaks. But if that evidence should not be enough, we have only to add the fact that the negro cannot take the disease, although it rages most in the very quarters where negroes live. The yellow fever still lurks about the wharves and shipping quarters of towns where cargoes of slaves used to be landed (*e.g.*, the barracoon at Havana); and every few years, when the weather is at the hottest, it rises into a pestilence, as if it were the ghost of the slave-trade walking. But it passes by the negro, as if it recognized the ties of blood; and I want no other fact than that to prove that even this infection, belonging to the exogenous group, is but one step removed from perturbations of the normal life, and that it carries with it the indelible stain of its origin.

The connection between yellow fever and the dysenteric and other discharges of the negro body is only a part of that general connection between dysentery and typhus which has often been noticed in wars and famines. It formed the subject of a debate, in 1861, before the Epidemiological Society, in which the late Dr. Murchison gave an outline of the argument that he afterward maintained with so much learning and research in his treatise on "Continued Fevers." The celebrated cases of jail-fever, in which prisoners brought up at the assizes gave typhus to the judges and counsel and jury, are full of pathological interest; and it may be well, at the present day, to recall the fact, which arrested the attention of Lord Bacon, that the prisoners were not suffering from typhus themselves. But we need not go farther back than twenty years ago, or farther away than the city of Liverpool, for proofs of the *de novo* origin of a specific fever; no more striking proof was ever given of the genesis of typhus out of dysenteric and other filth than in the case of the Egyptian frigate which came from Alexandria to the Mersey in 1862 to be refitted. There were four hundred Arabs on board, who had suffered a good deal from diarrhœa and dysentery; they had met with rough weather all the way from Alexandria, and the hatches had been battened down for two or three weeks continuously. When the ship arrived in the Mersey, the 'tween decks were in a disgusting state of filth, and the pilot who took the vessel up the river remarked to his wife when he went home that that ship would be heard of again. He was himself the first victim, for he was seized with a fatal form of hemorrhagic typhus about a week afterward. More than one hundred of the crew were on the sick-list, chiefly from dysentery, but it was carefully ascertained that none of the cases were typhus. Most of the Arabs went to a public bath in their filthy state, and in a few days typhus broke out among the bath attendants. Some of the crew were admitted into the Southern Hospital for various non-contagious disorders, and there also typhus broke out.

All the facts of this most interesting case were communicated to the Epidemiological Society by the late Dr. Duncan, medical officer of health. It was Dr. Duncan's opinion, and also Dr. Cameron's, the present President of the Medical Section, that the outbreak was clearly traceable to the Egyptian ship and her filthy crew, but that it was not traceable to pre-existing cases of typhus, whether on the voyage or in Alexandria before sailing.

There is one other class of cases which I shall just mention—the cases in which the mere contact of human beings in an average state of health and cleanliness sets up various epidemic disorders among the inhabitants of remote islands, where strangers rarely come. Mr. Darwin, in his narrative of the voyage of the *Beagle*, quotes instances of this in the South Seas, on the excellent authority of Williams, the missionary; and it is to typhus that Mr. Darwin compares these cases. "It would almost appear," he says, "as if the effluvium of one set of men shut up some time together was poisonous when inhaled by others, and possibly more so if the men be of different races."

I shall take one other illustration of the doctrine of acquired autonomy, and I shall take both the facts and the doctrine from Sir Thomas Watson. The English troops that served in Egypt in 1801, under Sir Ralph Abercrombie, suffered much from the ophthalmia of that country, which is always brought on by exposure to cold after being heated, by the glare of the white and parched ground, by the dust in the air, and such-like causes peculiar to the climate of Lower Egypt. No one, in those days, thought that Egyptian ophthalmia was a specific infection. But some of the English soldiers returned with it uncured, and it soon became contagious in the home garrisons; and it was found, after a lapse of eight or nine years, that there were no fewer than two thousand three hundred and seventeen soldiers pensioners upon the public bounty from total blindness in consequence of ophthalmia. Those who knew the disease as it occurs in Egypt denied that it was contagious, and those who saw it in England were as positive that it was contagious. Watson reconciles the two views. He says that "there is nothing absurd nor unlikely in the supposition that diseases may first arise from some other source, and then become capable of spreading by contagion;" and he says elsewhere: "My own creed upon the matter is this—that the disease may, and often does arise, independently of contagion, from the agency of ordinary causes of inflammation; and that, having so originated, it acquires contagious properties, which develop themselves only under circumstances that favor the propagation of most of the contagious complaints." A parallel to the Egyptian ophthalmia of 1801 may be found in certain cases of syphilis described by Baron Larrey in his surgical history of the same campaign. The Alexandrian syphilis, which the French troops contracted largely, was peculiarly free from "grave symptoms," and "easily cured;" but it proved very "obstinate and difficult to destroy" in those who brought it back with them to France.

In choosing to speak of infective diseases from a standpoint which is not the dominant standpoint of the time, I fear that I have laid myself open to the charge of taking advantage of a public opportunity in order to get a hearing for a somewhat peculiar view; but the words which I have just quoted from Sir Thomas Watson will show that this doctrine of common disorders acquiring specific power has not been absent from the thoughts of those who lived in the philosophical period of medicine. Nothing would be more agreeable than to adduce other instances of the same kind from the history of medicine, and I especially regret that time will not permit me to say something of this principle of autonomy as it was held by the thoughtful and talented writers who were known in Germany fifty years ago as the Natural History School. But in anything that concerns the natural history of disease, we may go direct to Sydenham, who was the author of the phrase, and in Sydenham we shall find a very explicit statement of the doctrine of an acquired autonomy and a pre-autonomous stage in the specific diseases. Sydenham uses the language of the humoral pathology of his time, but that matters little. The humors, he says, may, under certain circumstances, be raised to the dignity of a substantial form or to a species, a specific disease being one that takes its rise in the specific exaltation or specification of some juice of the body; and he expressly mentions the antecedent condition of the humor before it had put on its species—*antequam hanc induerat speciem.* If I have preferred to speak of the acquired autonomy of a disease, and of its pre-autonomous stage, I mean no more than Sydenham means here, as the context of the passage would show.

Sydenham compares these species of disease to the species of animals and plants, only that their life is an integral part of the general life of the body; and as we have an origin of species for animals and plants, it is natural to think of the origin of disease species. But there is a difficulty in the latter which the Darwinian problem is free from. In the origin of species we are dealing with individual things, each with its well rounded, independent life; but where is the individual life in disease? In my humble opinion, the germ will not serve our purpose, for, according to the great Darwinian analogy, the germ is always a part of the individual, and always presupposes the individual. The germ, or the sperm, is no doubt a peculiarly important part, and it is charged with the most marvellous representative powers, but it is always representative of the individual, and it derives its powers from the individual. Such, at least, is our only analogy.

If, then, we must have the individual to start with, before we can apply the "origin of species" to disease, we come back to the old question, how a morbid state of

the body can become a semi-independent thing, how it can exist, not in absolute independence of the body, but autonomous within it, an *imperium in imperio*. This is the perplexing question which I stated at the outset with reference to cancer, a disease which, in the popular estimation, is almost synonymous with a semi-independent life; and I quoted the words of Paracelsus: "In such a disease a man is himself and another; he has two bodies at one time, enclosed the one in the other, and yet he is one man." I have spoken to several metaphysical friends of the difficulty of conceiving how a mere state of the body, a complex or integrated morbid state, can become an individual existence with the power of propagating itself; but I cannot say that I have got anything satisfactory out of them. We shall probably have to settle this question within our own science as a part of the subject-matter of pathology. Pathology is indeed varied enough in its subject-matter. It studies disease on many sides, as the founder of this Association planned that it should be studied—the side of its anatomy and its physiology, of its geography and its ethnology, of its history and its natural history. Its aspects are as various and attractive as the fruit trees in the Mohammedan paradise. But there is nothing in all this boundless field of inquiry that is more likely to occupy the mind of the profession for years to come, as it has occupied it in times past, than the difficulty of conceiving how a state or condition of the body can become a species of disease.

THE PRACTICAL TREATMENT OF ABDOMINAL HERNIA.

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I.

The following remarks on abdominal hernia are placed before the profession with the sincere hope that they may lead, in some instances at least, to the better treatment of these affections, and to the more thorough study of a part of this subject, now much neglected.

It is probable that no subject within the domain of surgery has received more thoughtful and careful study than that which has been bestowed upon the surgical treatment of hernia from the days of Hippocrates to the present time. It is in the writings of Hippocrates that we find the first account of this affection that is in any degree correct. In later years it is described in the works of Celsus, Antoninus, Galen, Oribasius, Ætius, and Paulus Æginetus, the latter in the seventh century, and those first mentioned prior to that date. From that early period up to the present time we find prominent among other writers the names of Albucasis, Roger de Parma, Franco, Benedictus, Ambrose Paré, Fallopius, Vesalius, Scultetus, Percival Pott, Scarpa, Lawrence, and Sir Astley Cooper.

In our own time the works of Wood, Dowell, Heaton, and others, relating to special operations or methods, will hardly bear favorable comparison with some of those earlier writings.

In the writings of the authors mentioned, and from the ably written articles on hernia contained in the standard works on general surgery, we can obtain accurate knowledge of the anatomy, pathology, and surgical treatment of these affections; in fact, so faithfully did Sir Astley Cooper study the subject that very little new material has been added to it since his time. The study of the management of and operation upon strangulated hernia has been exhaustive, and all teachers of surgery favor to impress their students with the importance ough understanding of this branch of the sub- ingenious operations have also been devised cure, most of which receive stronger en- eir authors than by more impartial

the line in which these studies have been pursued, and beneficial in many instances, but they are of little service to the average patient suffering from, perhaps disabled by, a neglected hernia, who has not strangulation, nor the time, money, or inclination to attempt to obtain a radical cure. It is to this latter class that I desire to call the attention of the profession, and it is for their relief that I ask for a more rational treatment of hernia. It surely is as much the physician's duty to prevent strangulation as to relieve it when present. To treat disease only after it has arrived at its most dangerous stage is not, and should not be, in this instance, the practice of the conscientious physician.

In this country there are at a safe estimate five million persons suffering from some one of the various forms of abdominal hernia. In spite of poor treatment a few get well, others manage by their own ingenuity to prevent an increase in the bulk of their hernias, others by accident get something nearly suited to their cases; but a great majority of this vast number are growing worse every year until wholly or partially disabled, and many are saved from death only by timely and judicious surgical aid.

I speak advisedly when I say that the greater part of this suffering is entirely unnecessary, and due to the fact that when patients of this character apply to that source from which they should naturally expect and obtain relief, they are most frequently referred by their physicians to persons ignorant of the requirements of the case, who attend them on a purely speculative basis.

It is a crying shame that these numerous cases, so deserving of relief, so susceptible of alleviation in the hands of the professional man, are still neglected by the majority of practitioners, who shift all responsibility to the druggist, instrument maker, equally incompetent truss vender, or allow them to drift into the clutches of that chief of charlatans, the self styled "rupture doctor," who is ever ready with his testimonials of cure to exact an exorbitant fee from his easy victim.

It would be a poor surgeon who should leave the application of splints in the hands of the manufacturer, and devote years of study in trying to remedy the bad results sure to follow such practice, and yet this is done in cases of hernia. It needs no statistics, however, to prove that there is more danger to life, and of disability in an ordinary hernia, than in an uncomplicated fracture of the humerus, allowing that both are equally neglected. Why this difference in practice in the two cases? Why is the one dismissed with scarcely a second thought, while the other receives the surgeon's most careful attention? The answer, I believe, may be found in the prevailing, but certainly erroneous idea, that for a person afflicted with hernia there is positively no cure, and probably no relief.

To inform a patient suffering from hernia that no relief can be obtained, sending him off to buy a truss, thus dismissing the case, is doing that person a very great injustice, and the writer has seen most unfortunate results following this common practice. On the contrary, the sufferer should be informed of the importance of remaining under the observation of his physician, and carefully instructed in the proper use of the necessary appliance.

An eminent authority across the water has truly said: "The expediency of judiciously pursuing the mechanical treatment of every variety of hernia cannot be too strongly urged upon the laity by the profession. In both sexes it should be carefully conducted the moment that the slighest protrusion shows itself. Whether the hernia occurs in infancy, youth, at middle age, or at later periods of life, if properly watched and judiciously supported, it usually gives but little trouble; in many cases it is even cured. But, on the contrary, if it be neglected, increase in bulk, and sooner or later diseased states of the rupture, often leading to the death of the individual, will almost infallibly occur."[1]

[1] Holmes' System of Surgery, vol. ii., p. 676.

Percival Pott, writing in 1779, recognized the importance of giving these cases early and careful attention in order to secure the best results. It is to be regretted that the writings of this and other authors have not made a deeper impression upon the general profession. He says: "There are many circumstances attending ruptures which will require frequent assistance in order to render a cure more probable, and there are many ruptures in persons of mature age which will admit of perfect cure if properly and judiciously managed from the first."[1] The remarks of the same author upon the charlatans who thrive upon this class of cases is, it is to be regretted, still applicable: "It has in all times, from the most ancient down to the present time, rendered those who labor under it subject to the most iniquitous frauds and impositions. No disease has ever furnished such a constant succession of quacks as ruptures have." In this, as in other instances, those branches of practice overlooked or neglected by reputable and educated physicians are the fields in which quackery best thrives. By keeping these cases within the profession, and bestowing the same amount of time and study upon them now given to surgical cases of even less importance, methods of treatment would improve, results now considered impossible would be attained, and sufferers will not, as heretofore, be obliged to submit to the impositions of incompetent and dishonorable persons.

As the limits of this article will not admit of a detailed account of the proper treatment of each variety of hernia, I shall at present make only a few such suggestions as are applicable to all cases; at a later date I intend making some observations on the best practical methods of treating each form, in order to secure the greatest number of cures, and the maximum amount of improvement in those considered incurable. In order to form an opinion in any degree correct upon which a prognosis may be based, it is important at the outset to get a full history of the cause, development, and past treatment of each individual case. A hernia produced suddenly by heavy lifting, violent coughing, or other similar causes, is far more susceptible of cure than one coming on gradually with a relaxed and flabby condition of the abdominal parietes, and a distinct hereditary predisposition. Hereditary predisposition will be found an important factor in some cases. The writer has under observation one family in which nearly every male member for four successive generations has been afflicted with inguinal hernia; another family where in three generations almost all of the female members have suffered from either umbilical, inguinal, or femoral hernia.

The exact cause of this predisposition is, I think, left for future study to determine. Sir Astley Cooper believed it due to the width or shape of the bony pelvis, but, after accurate observations under favorable conditions I am unable to endorse this view, having found by diagrams representing the exact shape of a section of the pelvis, taken from several members of the same family in which hernia was undoubtedly hereditary, that they did not on comparison show any striking resemblance in size or shape.

By a thorough search for the immediate cause of a hernia much may be accomplished in many instances, especially if the case be a recent one, as, if the cause be found to be one which may be removed, the chances of complete cure are thereby greatly enhanced. For example, if a person has recently produced a hernia by straining at stool, due to constipation, this cause must be removed at once, and then with suitable treatment, immediately applied, there is more than a mere chance of complete recovery. The same remarks apply with equal force to cases of stricture and to children suffering from congenital phimosis.

The writer has seen several instances wherein the latter has produced the most rebellious hernias, which have entirely recovered when the cause was removed. At the Children's Hospital, London, Mr. Kempe found in fifty consecutive cases of congenital phimosis, thirty-one cases of hernia which had developed since birth. Improvement began in every instance as soon as circumcision was performed, and in five cases immediate cure of the hernia resulted.[1]

One of the most obstinate scrotal hernias the writer has ever had to contend with was caused by vesical calculi in a patient over fifty years of age. After the operation for the removal of the stone the hernia so far improved as to enable him (contrary to advice) to go days at a time without his truss and still no protrusion occurred.

The variety and condition of the hernia should receive careful consideration. It is quite essential in inguinal hernia, for instance, to determine with certainty whether we are treating a direct or an oblique protrusion, as in the former the centre of pressure used for its retention should be at the external ring, while in the latter it is of the first importance that it should be worn over the internal ring. The methods of diagnosis are so fully given in all text-books on surgery as to make their mention here unnecessary, and their treatment will be taken up later.

Is the hernia reducible? In the majority of cases it will be so found; in a few, attempts at reduction will not be attended with success. Do not decide this point hastily, however, and thereby consign your patient to the lifelong danger, discomfort, and disability sure to result from irreducible hernia. In order to illustrate the importance of this statement the following case is cited:

E. C——, merchant, aged thirty-eight, consulted me, September 10, 1879, respecting a very large scrotal hernia, which had not been reduced for six years. Originally small and easily controlled, it had arrived at its present condition through the use of inferior trusses, bought of the druggist to whom his physician had sent him, selected and applied according to his own judgment. Now, after having abandoned all support for several years, it has been pronounced, by four physicians, irreducible hernia, and is so troublesome as to unfit him for business. In character it is an entero-epiplocele, the largest part of the protruding mass being omentum, which in places appears firmly adherent.

Gentle but constant taxis, with hips elevated, was continued for *one hour*. No perceptible effect was produced, and the patient was instructed to return to his hotel and remain in bed twenty-four hours, the diet to be the lightest possible.

September 11th.—Taxis again employed for about half an hour, and with better results, about one-third of the mass being returned. Efforts at reduction discontinued, patient instructed to remain in bed as before.

September 12th.—After twenty minutes' trial entire mass gradually returned within the abdomen. A suitable retentive appliance was adjusted, and instructions given that should colic, nausea, or vomiting occur, it was to be removed at once and the hernia allowed to descend; patient to remain in the recumbent position. About one hour later discomfort in the umbilical region was experienced, soon followed by vomiting. Support removed and greater portion allowed to descend, after which unpleasant symptoms soon subsided. No further attempts at retention were made on this day.

September 13th.—Hernia reduced with very little difficulty, and retained for three hours before discomfort was occasioned.

September 14th.—Support worn six hours, and on the following day all day.

Four months later I made the following note in my case-book: "Improvement in this case rapid, and to an unexpected extent; hernia never descends, even under

[1] The Chirurgicial Works of Percival Pott, vol. ii., p. 48.

[1] The Lancet, July 27, 1878.

light pressure. Attends actively to his business, and experiences no inconvenience either from his hernia or the appliance worn." This case has been given in full because it clearly illustrates three very important points, viz.:

First.—That an apparently irreducible hernia can, in some instances at least, by judicious and persistent taxis be returned to the abdominal cavity.

Second.—That extreme caution is absolutely essential to the safety of the patient, after as well as during reduction.

Third.—That great improvement is possible, under favorable conditions, even in extreme cases; that the patient can be brought from disability, suffering, and the constant dangers of strangulation, to a condition closely approximating a cure.

In employing taxis only the most gentle manipulation is admissible, and the patient should not be subjected to any amount of discomfort. The necessity of closely watching the case after reduction can not be over-estimated; omentum after a long residence outside of the abdominal cavity becomes hardened and changed in character, so that when returned it acts upon the peritoneum as a foreign body. Petit has recorded a death due, as was found post mortem, to peritonitis produced by returning and keeping within the abdomen omentum which had long been protruded.

These hernias of long standing are worthy of the surgeon's most careful and persistent attention, and when this is given, he will frequently be rewarded by the most gratifying results.

M. Thiry, in a carefully written paper read before the Royal Belgian Academy of Medicine, arrives at the following conclusions:

First.—Old hernias of large extent, constituting a variety of eventration, are susceptible of reduction in most cases.

Second.—The large volume of a hernia is never a contra-indication to its reduction, although it necessitates the adoption of certain precautions, and the employment of considerable time.

Third.—The diminution in the capacity of the abdominal cavity in old hernias is never antagonistic to a slow, methodical, and progressive taxis.

Fourth.—By slowly re-entering the abdominal cavity the extended parts gradually resume their former places.

Fifth.—The best method of reduction is "compressing taxis," which consists in only restoring organs to their natural position after they have been relieved by pressure of any vascular engorgement. Those organs which effected an exit last should be first replaced."[1]

In attempting the reduction of these old hernias considered irreducible, it is best that the patient be fully informed at the start of the importance of having the protruding viscera returned to the abdominal cavity, otherwise he may become impatient under the confinement to bed.

In hernias of this class, when strong pressure is necessary to retain the mass after reduction, great trouble is sometimes experienced in keeping the skin beneath the pad in a healthy condition. To accomplish this, strict cleanliness of the appliance as well as of the person is absolutely essential, combined with such local medication as may be indicated. In the hands of the writer the following powder applied beneath the pad on a thin layer of absorbent cotton has proven more efficient in action than any other means resorted to for hardening the skin and keeping it healthy:

℞. Amylum		℥ iv.
Creta gallica		℥ ij.
Alumen ust		ʒ i.
Acidi boraci		ʒ ij.
Acidi carbolici,		
Ol. limonis	āā.	ʒ ss.

Ft. pulv.

The parts should be thoroughly washed every night, and freshly powdered absorbent cotton placed beneath the pad every morning for the first week that the support is worn. The results will fully compensate for the extra trouble involved.

The writer in his earlier experience in the treatment of hernia, had the importance of employing these precautions impressed upon him by the following circumstance: The case was an extremely obstinate oblique inguinal epiplocele, and very strong pressure was required for its retention. After the adjustment of the appliance, which was perfectly successful in its retentive action, the gentleman failed to present himself for examination on the following day as requested, and at the end of one week I was asked to see him at his house. I found that he had experienced no great amount of discomfort, but on removing the support on the night previous, the skin had adhered to the pad, and he had removed a piece of the integument which had sloughed away, corresponding in size with a silver half-dollar, leaving the subcutaneous tissues completely exposed. Suitable dressings were immediately applied, but with the most careful attention the patient was confined to the recumbent position for three weeks before the process of healing by granulation was complete, and for this amount of discomfort and detention from business he had only himself to blame for disobeying the instructions given him.

THE DIAGNOSTIC SIGNIFICANCE OF IMMOBILITY OF ONE VOCAL BAND.—Dr. J. Solis Cohen, in a paper in the July number of the *American Journal of the Medical Sciences*, points out: *First*, that laryngoscopy may sometimes be the sole or most efficient means of diagnosis in affections located exterior to the larynx; and *second*, that a liability to error might often be incurred, were we to place too exclusive a reliance upon the objective symptoms, as presented by the image seen in the laryngoscopic mirror. From a study of cases under his observation he concludes: 1. That whenever the left vocal band is immobile in abduction, or in the cadaveric position (positions in which the patency of the glottis is not interfered with), and there is cough or dyspnœa (or both), without cardiac or pulmonary lesion to account for these symptoms, we are justified in suspecting aneurism of the aortic arch; and difficult deglutition will be almost certainly confirmatory of the diagnosis, notwithstanding the absence of tumor, pulsation, thrill, and bruit. The only, and exceedingly improbable source of error, would be intrathoracic neoplasm. 2. That anchylosis of the crico-arytenoid articulation may fairly be suspected in cases of immobility of one vocal band, not referable to mechanical interference with the transmission of nervous force; unaccompanied with evidence of central or local nervous disease; and in which failure to respond to appropriate treatment will warrant us in excluding muscular atrophy. But the diagnosis can be finally established only by the application of direct pressure to the affected arytenoid cartilage. 3. That whenever one vocal band is immobile in the cadaveric position or in abduction, and there are no other signs or symptoms to assist the diagnosis, anchylosis being eliminated, we should not be satisfied with a diagnosis of neuropathic paralysis; but should keep the patient under observation with a view to detecting the earliest manifestation of aneurism, consolidated lung, or other mechanical cause for the impaired innervation.

WESTERN CRITICISM.—Bellevue Hospital Medical College, while ostentatiously proclaiming in her announcement her fidelity to the Code of Ethics, places no restrictions on the admission of students to her classes, other than that involved in the price of her tickets. It is, of course, much more important that a physician be ethical than that he should be at all prepared by previous education to take up the study of medicine. Great is reform!—*Medical Age.*

[1] Bulletin de L'Académie Royale de Médecine de Belgique, vol. xv., No. 6.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, August 11, 1883.

THE GERM THEORY OF TYPHOID FEVER AND THE TREATMENT OF THIS DISEASE BY SALICYLATE OF BISMUTH.

THE tendency of the age is undoubtedly to account for all the contagious febrile affections, as well as many chronic diseases, by the hypothesis of a specific microphyte, whose ravages constitute the pathogenetic element. This tendency is exemplified in the theory, recently formulated, and ably supported by Klebs, of Prague, and Eberth, of Zurich, as to the etiology of typhoid fever.[1]

According to these pathologists typhoid fever is due to a peculiar microbe which presents itself in the form of rods or filaments, some of which contain spores. Between the rods and the filaments transition forms are observed, which make it probable that the latter are derived from the former.

These micro-organisms have been found by Klebs, in accordance with the period of the disease from which death resulted, in the following localities: 1, in the intestine, first in the glands of Lieberkuhn, later in the interglandular tissue and in Peyer's patches, still later in the submucous cellular tissue, and even in the muscular layer; 2, in the mesenteric glands; 3, in the spleen; 4, in the lungs (the parts affected with hypostatic pneumonia); 5, in the brain.

He has also found them in abscesses complicating typhoid fever, in ulcerations of the larynx, in the kidneys, the myocardium, etc. In these various sites he has detected the same microbe, and in numerical abundance proportioned to the disorder of function of the organ where the bacillus has been found. Klebs has made many cultures of the microbe, and has inoculated animals with the final product, reproducing in hares, pigeons, guinea-pigs, etc., the characteristic anatomical lesions of typhoid fever.

Eberth, of Zurich, after an independent series of investigations, has found in the lymph-organs of the abdomen —intestinal mucous membrane, mesenteric glands, spleen —certain rods whose characters correspond with those noted by Klebs. These rods have, in fact, been identified with Klebs' bacilli.

Klebs gives a graphic *résumé* of the march of this malady. The bacillus typhosus, or its spores, are taken into the mouth and pharynx in the air of respiration and are carried to the stomach with the saliva or food. Arriving in the small intestine they produce by their multiplication a diffuse catarrhal inflammation, and commence to penetrate the mucous membrane. This anatomical stage corresponds to the period of incubation of the disease, a period characterized by anorexia, prostration, and a slight febrile movement. At this epoch the disease is still local; it is not till later, when the bacillus has effected an entrance into the blood and has invaded the organs, that we witness the second "classic" stage, the stage of infection, characterized by fever, cerebral symptoms, etc. At the same time the intestinal inflammatory process concentrates itself on Peyer's patches, which finally become necrosed and eliminated. The microbes, moreover, may multiply in the spleen, brain, lungs, and produce there grave disorders.

It sometimes happens that the bacillus first undergoes development in the lungs; the disease then commences as a pneumonia (typhoid pneumonia); at the autopsy the intestinal lesions (when they exist) are more recent than the pulmonary lesions.

The primitive lesions of the intestine are not always in such direct relation to the secondary lesions of other organs, that to the intestinal alterations, however extensive and profound, corresponds a proportionate perturbation of other functions of the economy. The autopsy often demonstrates that the intestinal ulcerations may be most marked and grave, at the same time that the general infection may have been almost nul; such are the cases described as *typhus ambulatorius*, or walking typhoid. On the other hand, with general infection and serious constitutional symptoms, the local intestinal lesions may be inconspicuous or wanting. In a word, typhoid fever comprehends two distinct diseases; the local intestinal lesion, and general infection with localization in different organs. These two factors of this complex disease are synchronous in a part of their duration. The first precedes the second, and the latter is in full evolution while the lesions of the former are undergoing reparation.

The germ theory of typhoid fever is far more probable than the chemical theory; in fact, we can imagine no chemical ferment or "poison" which is capable of producing such phenomena, while the hypothesis of a *contagium vivum*, infinitesimal in its commencement, pullulating in the system, and invading important vital organs, which are robbed by it of their life-sustaining oxygen and pabulum, till the environing conditions are no longer favorable for the maintenance of the parasite, well explains all the striking phenomena of the disease. Moreover, important inductive evidence is every year making the microphyte theory less an hypothesis and more a fundamental fact in pathology. The inoculation experiments of Klebs, above alluded to, constitute the kind of proof now demanded.

Almost all pathologists being convinced of the germinal origin of all contagium, there is a dominant desire on the part of therapeutists to attack the microbe by suitable germicides in the alimentary canal or in the blood, to prevent its multiplication and effect its destruction. There is very general agreement that we are not yet in possession of any sure and safe means of combating the germinal *materies morbi* when once it has effected entrance into the blood. No one has more clearly shown

[1] Bulletin gen. de Therapeutique, June 30, 1883, Desplat's article, to which we are indebted for this summary.

this than professor Germain Sée in a late lecture.[1] Quantities of any known antiseptics, such as would be necessary to rid the blood of the parasitic contagium would be toxic and speedily fatal to the organism. This is notably the case with such germicides as bichloride of mercury, chlorine, iodine, carbolic, and even salicylic acid. Salicylic acid, the only acid seriously to be thought of in this connection, has never yet been given in sufficient doses to arrest typhoid fever in its march, or even materially to modify its evolution. Professor Sée has known of a rheumatic patient who, while taking ten grains every two hours of salicylic acid for several days, was nevertheless attacked by typhoid fever, which pursued its usual course.

Being then debarred from any safe and certain chemical antidotes against the morbific bacillus when it has pervaded the system, our therapeutical efforts are diverted to other indications, such as the support of the vital forces in the struggle in which they are engaged. But can we do nothing to effect the destruction of the disease-germ while it is in the alimentary canal, before it has penetrated the tissues or gained the circulating fluids? Not a few distinguished therapeutists have answered this question in the affirmative, notably Gueneau de Mussy, Herard, Hallopeau, Liebermeister, Wunderlich, and in this country Dr. James C. Wilson and Roberts Bartholow.[2] The treatment of the last two authorities is essentially identical. Calomel is given in full purgative doses several times during the first week. This is exhibited for a double purpose, to restore heat production and to destroy typhoid germs in the intestine. Iodine is given throughout the disease in combination with carbolic acid, or as Lugol's solution. Bartholow's formula is two parts tincture of iodine to one of strong carbolic acid; of this from one to three drops every three hours during the day and night.[3] By this medication it is intended to arrest the multiplication of germs in the intestine and prevent fermentation.

Professor Henri Desplats, of Lille, is favorably known by his numerous theses on the antiseptic treatment of fevers, especially by a memoir published last year on the treatment of typhoid fever by carbolic acid. After long experimentation with various salicylates in typhoid fever, he has found in the salicylate of bismuth the great desideratum. It is sparingly soluble, and therefore is more likely than most medicaments to escape absorption in the stomach and to reach the diseased intestine. It moreover has an energetic action on the organized ferments, and is a bactericide of great power. Taken during the prodromic period, when the infection is purely intestinal, the microbes not having entered the blood and tissues, its efficacy is greater; in Dr. Desplat's experience it has even had a marked abortive action. Thus, out of twenty cases reported by him, eleven (or more than one-half) treated in the first stage were cut short in four or five days under the free use of salicylate of bismuth. At least this is the belief of the professor, who gives the particulars of these cases with great minuteness, showing that the patients had all the characteristic symptoms of the disease with varying degrees of severity. In four cases the bismuth salt had a very decided moderating effect on the temperature, but the disease was prolonged by complications. In five cases, all of which were very grave, the action of the medicament was nul. The ordinary dose was about a scruple. This was repeated sufficiently often, so that the daily quantity taken should equal about six grammes (or about one drachm and a half). In some instances, where the fever-heat was excessive, the salicylate was given in one full dose of three, or even six drachms, but these large doses proved somewhat depressive. The medicament is not unpleasant to the taste and is easily borne. In short, the perusal of this article seems to justify the hope that in the salicylate of bismuth we have a new medicament of very great antiseptic value.

[1] Traitement de la Fièvre typhoide, Paris, 1883.

[2] *Vide* Wilson on Continued Fevers, p. 228. New York, William Wood & Co. Also an able statement of Wilson's and Bartholow's antiseptic method of treating typhoid fever in the New York Medical Journal, vol. xxxvii., page 298.

[3] Boston Medical and Surgical Journal, February 1, 1883.

PREHISTORIC SURGERY.

In a paper read before the Surgical Section of the Fifty-fifth Convention of German Naturalists, Dr. Tillmanns presented some interesting conjectures concerning the state of surgical art in the stone age (*Centralblatt für Chirurgie*, June 23, 1883). He first reviewed the surgery as practised at the present time by peoples supposed to occupy the same plane of development as prehistoric man in the stone age. Then, from articles found in the caves of the men of this age, he formed his conclusions concerning their surgical practice. Among the peoples still living in the stone age he reckons the Australians, the South Sea Islanders, and the Esquimaux. Dr. Miklucho-Maclay has given an account in the *Zeitschrift für Ethnologie* of castration and ovariectomy as practised among the Australians. He states that girls are robbed of their ovaries in order that they may serve as "hetaiva" to the young people. The operation is performed through an incision by means of sharp flints, on each side parallel to Poupart's ligament. The operation looking to the sterilization of men is performed by cutting away the under wall of the urethra from the meatus to the scrotum. This is done by means of a knife formed of a splinter of quartz set in a handle made of the dried sap of an indigenous tree. The South Sea Islanders trephine for injuries of the brain or skull. A T-shaped incision is made through the scalp and the bone scraped away with a splinter of glass. The operation is fatal in about one-half of the cases. In case of recovery the hole is covered with a thin piece of cocoa-nut shell. If the brain is found to be injured the destroyed portion is replaced with a piece of the brain of a recently killed hog. This procedure is said to promote recovery. The natives of Tahiti possess a large surgical armamentarium, consisting of flints, bistouries made of shark's teeth, sharpened bones, etc., similar to those found in the caverns of the stone age. They make saws also from shark's teeth. The Esquimaux produce abortion by pressing or striking against the womb with a whip handle. They also use the sharpened rib of a walrus or a seal, which they guard with leather and introduce into the vagina to puncture the membranes.

Much has been learned of the operation of trephining in prehistoric times from the researches of Prunières and

Broca. The former found a so-called "rondelle," an oval piece of bone, one and one-half by two inches in diameter, taken from the parietal bone, in the excavations at Lozere. Such "rondelles" were worn as amulets. They were taken from the skulls of those who in life had survived the operation of trephining. Such men were regarded as holy. After their death fragments of bone were taken from about the trephined part and worn as charms. Many skulls showing this treatment were found. The operation seems to have been performed by scraping away the bone with a flint, as the oblique edges of the hole in the skull would indicate.

THE ALLEGED CURABILITY OF TUMORS BY THE PARENCHYMATOUS INJECTIONS OF OSMIC ACID.

SOME time ago we had occasion to comment upon a report published by Dr. Delbastaille concerning the favorable results obtained in the treatment of tumors by the injection of osmic acid. The cases referred to were observed at Winiwarter's clinic in Liege. A soft sarcoma, the size of a child's head, seated upon the right side of the neck, after an unsuccessful attempt at extirpation, was treated by the daily injection of three drops of a one per cent. aqueous solution of hyperosmic acid. After fourteen days the new growth was softened and discharged through the wound in the skin. In a month the tumor had entirely disappeared without any unfavorable local or general symptoms. Equally favorable results were obtained in the case of a multiple lymphoma, cervical adenitis, and a sarcoma near the shoulder.

Upon the strength of this report, the late Professor Bruns, of Tübingen, was led to make a trial of the remedy in a number of instances. The cases are reported at length by Dr. Pfeilsticker in the *Med. Correspondenzblatt des Württemb. Aerzt Landesvereins* of May 31, 1883. There were four cases of multiple tubercular lymphomata, one of malignant lymphoma of the neck, and one of a sarcoma, the size of a man's head, upon the left side of the chest. Unfortunately, not the slightest effect was observed in a single case, even after long-continued trial of the hyperosmic acid injections. The procedure was painless in most instances. The only obvious result, however, was the matting together of the tumor and the neighboring tissues, thus increasing the difficulty of extirpation by the knife. This want of success is explained by the strictly local action exerted by the acid. It causes a necrosis of the tissues at the point of injection, but produces no change in the surrounding parts. Evidently modern surgery commands better methods of dealing with neoplasms than the hypodermic injection of osmic acid.

FAVORABLE RESULTS OF TRAINING UPON THE SENSE OF COLOR.

IT has been stated by Magnus and others that color blindness is capable of correction by means of special training. And this seems not at all improbable, reasoning from analogy, since other senses may be developed to such a wonderful degree in certain directions by careful education. An observation made recently by Dr. W. Kroll is of interest in this connection (*Deutsche Medicinal-Zeitung*, June 7, 1883). He examined a large number of men in Crofeld and its vicinity, but found only 0.6 per cent. affected with color-blindness. The usual proportion is three per cent. of all examined. The principal industry of Crofeld, for nearly two centuries, has been the manufacture of silk stuffs and velvet, and it seems reasonable to attribute the low percentage of color-blindness among the inhabitants to the education of their sense of color perception consequent upon their occupation. It would be easy to pursue these investigations further among operatives in print works and in other places where colored materials are manufactured in this country, and the results thereby obtained might prove to be of interest, and would certainly have a real practical value.

News of the Week.

CONCERNING ACONITIA.—Dr. J. O. Tilton writes us to know if the granules of aconitia ($\frac{1}{100}$ grain Duquesnel) administered according to directions given in an editorial article in this journal, July 14th, are safe. We have seen nothing, and we are able to find nothing which would lead us to fear any unfavorable results from this drug given with the precautions which we have urged, namely: not to take more than $\frac{1}{4}$ milligramme at a time, and not to repeat the dose oftener than once in three hours, and not to exceed 2 milligrammes ($\frac{1}{30}$ grain) a day. Granules of aconitia, containing $\frac{1}{100}$ grain, are sold in our drug stores. These granules contain somewhat more than $\frac{1}{4}$ milligramme, and should be used with more caution. We have prescribed these granules in several instances with good effects, directing one granule every four hours till some tingling of the tongue, pricking of the face, or tightness about the temples, was experienced. Generally decided amelioration has attended these symptoms, which indicate that the physiological effect of the alkaloid is being realized. In fine, it cannot be claimed that $\frac{1}{100}$ grain aconitia is in any sense a poisonous or a dangerous dose, and we should not hesitate to repeat it every four hours till either the pain is subdued, or till some or all of the minor toxic phenomena above mentioned are felt, watching the actions of the medicament, and being ready at any time to interrupt its administration, as we would do with any powerful remedy.

THE ADDRESSES BEFORE THE BRITISH MEDICAL ASSOCIATION.—We have the pleasure of presenting in the present issue the addresses of Drs. Waters and Creighton, delivered before the British Medical Association last week. These comprise, with Mr. Harrison's address (published last week), all those delivered before the General Meeting of the Association. Both articles will be read with interest on this side of the Atlantic, and will amply repay the extra space given them. Dr. Creighton's able exposition of his subject, and the arguments used in support of his views will be especially interesting and instructive to advanced pathologists and earnest students in the higher professional studies.

THE CHOLERA.—The news from Egypt is becoming less alarming. It is said that some of the leading physicians of Smyrna do not regard the scourge as cholera. By last report there were thirteen deaths in Alexandria, and the number of cases of the disease was decreasing in the interior.

NEW YORK POST-GRADUATE SCHOOL.—DR. A. H. Smith has been elected Professor of Clinical Medicine and Therapeutics, dividing the former chair with Dr. T. E. Satterthwaite, Professor of Pathology and Clinical Medicine. Dr. Alex. J. C. Skene, of Brooklyn, has been elected Professor of Gynecology, dividing the chair with the present incumbent, Professor B. F. Dawson.

OUR CABLE DESPATCHES.—We beg to return our thanks to the numerous subscribers who have sent us so many kind congratulations regarding our cablegrams of the recent meeting of the British Medical Association.

THE ATLANTIC STEAMSHIP SERVICE.—A deputation of the British Medical Association and several members of Parliament called recently upon Mr. Joseph Chamberlain, President of the Board of Trade, and asked him to appoint a committee to consider the inadequate medical and sanitary management of Atlantic steamers. They commented strongly upon the want of proper precautions on emigrant vessels, from which a large annual sacrifice of life resulted. They suggested that ship-owners be compelled to increase the pay of ship surgeons, and that the American Government be requested to contribute a small sum toward the expenses of vaccinating passengers on board of vessels. Mr. Chamberlain replied that he intended to introduce in Parliament, in 1884, a bill dealing with the subjects mentioned and amending the shipping act.

THE GERMAN POLIKLINIC OF THE STATE OF NEW YORK.—We are informed that some of the German physicians of this city, have organized a Poliklinic (with an i). It is located on Sixth Street.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CHOLERA—THE WATER-SUPPLY OF LONDON—MEDICAL HONORS IN LONDON AND DUBLIN—THE CASE OF DR. BLADES—THE LATE DR. STEWART.

LONDON, July 28, 1883.

CONTRARY to expectation, cholera has continued to spread in Egypt. The Government are doing what they can to arrest its spread, and have just sent out twelve civilian medical officers to the affected district. Meanwhile a conference of medical officers of health on the subject has been held and arrangements made in readiness in case cholera should unfortunately reach our shores. The possible advent of cholera has again revived the question of a purer water-supply for London. We still drink only filtered river water in London—mostly from the Thames—and although the companies now have their intake higher up than London, the river is still not wholly free from sewage contamination from towns higher up the stream, although of late years great efforts have been made to lessen its pollution from such sources. There seems to be not the faintest chance of a water-supply for London from any purer source so long as the supply rests with the water companies. We shall have to wait, first, till the next session of Parliament for the London Municipal Bill; second, for a purchase by the new municipality of the companies' works and rights; third, for the construction of a conduit from a purer source. Meanwhile, while not improving the quality of the water, several of the companies have taken advantage of their parliamentary powers to largely increase their rates, which, by the way, may probably prove an advantage from a sanitary point of view, as it will direct the attention of the ratepayers to the general subject of London water-supply.

Two more baronetcies have just been given to London medical men, viz., to Dr. Andrew Clark and to Mr. Prescott Hewett. The former is the Premier's medical attendant, and has one of the largest practices in London as a general physician, having the repute of realizing over twelve thousand guineas a year. He has written on pulmonary diseases, especially on "Fibroid Phthisis," and lately delivered an important address on "Renal Inadequacy." Dr. Clark is an enthusiastic advocate of the temperance cause. He is at present senior physician to the London Hospital, and is very popular with his students. Dr. Clark is, if not the most eloquent, one of the *readiest* speakers in the profession. For getting up and delivering a lengthy impromptu speech on any subject he is—within the profession—probably unequalled.

Mr. Hewett holds an equally important position on the surgical side of the profession, being senior surgeon to St. George's Hospital, holding several appointments to the Royal family, and is an important contributor to "Holmes' System of Surgery." Mr. Hewett enjoys an extensive consulting practice among the élite of fashion at the west end.

Some Irish honors recently proffered have given less satisfaction. The lesser dignities of knighthoods have been offered to Surgeon George Porter and Dr. Banks, both of Dublin. The latter promptly declined the honor as not commensurate with his professional position; the former has, after deliberation, finally accepted. The feeling among the profession in Dublin is very bitter on the subject, and a deputation of medical men has waited on the Lord Lieutenant who told them he could not intervene in the case of honors awarded by the Crown.

The recent apparently arbitrary dismissal of a police-surgeon for his alleged neglect of a constable suffering from obscure diabetic symptoms terminating fatally, continues to excite attention, and *The Lancet* has started a memorial to the Home Secretary on the subject.

One of the latest losses to the London profession by death is that of Dr. A. P. Stewart. Dr. Stewart practised as a general physician at the West End for forty-three years, and was a very widely known member of the profession. Very early in his career he wrote a lengthy paper in which he differentiated typhoid and typhus fever, and to a large extent anticipated Sir W. Jenner's later but more complete researches. But Dr. Stewart did not follow up the clue he had obtained, and thus did not acquire the fame and position which might have been his. He was on the staff of the Middlesex Hospital for many years, and at the time of his death Consulting Physician to that institution. He also lectured at the school on materia medica and medicine successfully. He held important offices as a member of the British Medical Association, and after being for many years one of the secretaries to the Metropolitan Counties' Branch (a post in which he was succeeded by Dr. Farquharson, now M.P.) was presented with a handsome testimonial subscribed among the members. He was once offered the presidency of the Branch but declined it. Dr. Stewart was one of those of whom it can be truly said that he sought not the material rewards of his profession. His practice was never extensive. He was nevertheless beloved by all with whom he came in contact. His manner was genial and attractive, his character consistent and upright. He was well-known for his interest in all religious movements, and he made an attentive study of the revised version of the English Testament. He was a Scotchman by birth, and distantly related to the family of the Prime Minister. Had Dr. Stewart been more energetic and business-like he might have reaped a richer harvest in practice, but he was not pushing, and even declined to lecture at the College of Physicians when asked to do so a short time since.

Progress of Medical Science.

SALICYLATE OF SODA IN DIARRHŒA.—In an article on the pathology and classification of the various forms of diarrhœa, and on the indications for the employment of salicylate of soda in this affection, Dr. Calleza concludes as follows: 1. The products of the putrefaction of the contents of the intestinal tube are the sole cause not only of a number of varieties of idiopathic diarrhœa, but also of many secondary diarrhœas, in which the pre-existing disease has engendered a predisposition to decomposition. 2. Salicylate of soda is the most efficacious agent for preventing putrefaction in the intestinal tract without interfering with the normal digestive processes. It should always be employed when the stools have a putrid odor, especially if this character has been noted from the commencement. 3. Two or three doses of fifteen grains each per diem are sufficient for the speedy cure of strictly idiopathic diarrhœa. 4. In the secondary forms of the disease (which are far less common) a trial may be made of the salicylate rather as a prophylactic measure than with the hope of any marked therapeutic effect. 5. In syphilitic and phthisical diarrhœa, in that accompanying visceral abscess, especially of the liver, and in dysentery, salicylate of soda has produced the best results.—*Lyon Médical*, May 20, 1883.

THE USE OF COFFEE IN STRANGULATED HERNIA.—Dr. Antonio Sarra relates that he was called one evening to attend a man, sixty-three years of age, suffering from a strangulated femoral hernia. The patient was nearly moribund, there was no appreciable radial pulse, the face was pinched, the extremities were cold, and the attempts to vomit were almost incessant. Happening to remember the report of a similar case relieved by coffee, Dr. Sarra ordered an infusion of this substance to be employed as a drink and also externally, and then took leave of the patient, warning the family that death was inevitable unless a prompt amelioration ensued. Upon returning early the next morning he was surprised to find his patient in perfect health. The man stated that soon after taking the coffee he experienced a feeling of warmth and returning strength, then a large quantity of gas was expelled above and below, and when he put his hands upon the tumor it at once slipped back into the abdominal cavity, much to his astonishment as well as joy.—*Lyon Médical*, May 20, 1883.

CARDIAC AND PULMONARY SYMPTOMS DEPENDENT UPON GASTRO-HEPATIC TROUBLES.—In an exhaustive memoir upon this subject, embodying the results of a large number of observations, Dr. Barié concludes as follows: 1. Certain dyspeptic conditions arising from the stomach, intestine, or bile-ducts react upon the cardio-pulmonary apparatus and occasion morbid phenomena, which may be divided into four clinical groups: A. In the first form the heart alone is affected, as evidenced by palpitation and intermittence of the pulse. B. The second form is characterized by phenomena affecting both the heart and lungs. There is more or less oppression in breathing, amounting sometimes to orthopnœa and threatened suffocation. It appears almost immediately after eating and ceases when the process of digestion is completed, coming on again after the next repast. The cardiac troubles consist in dilatation of the right side, secondary tricuspid insufficiency sometimes following. There is a *bruit de galop*, which has its seat in the right heart, and also an accentuation of the diastolic sound at the level of the pulmonary artery, indicative of increased tension in the lesser circulation. During the attacks of dyspnœa there are observed a small, soft, and compressible pulse, cyanosis, coldness of the face and extremities, and sometimes even slight hæmoptysis. C. The symptoms arranged under the third group resemble very closely angina pectoris. D. In the last form the phenomena are scarcely noticeable; there is a little oppression in breathing after meals, and examination reveals a slight accentuation of the second sound at the pulmonary orifice, but there is no trace of dilatation of the heart. These varieties may be entirely distinct or there may be a combination of the symptoms of several forms. 2. These different phenomena are the consequence of a reflex action starting from the seat of digestive disturbance. The pulmonary capillaries are thrown into a state of spasmodic contraction, causing suddenly an exaggerated tension of the pulmonary system, and the right heart, struggling against this obstruction ahead, becomes first dilated and then hypertrophied. 3. Experimental physiology has demonstrated that this reflex action takes place wholly in the sympathetic system; nevertheless, clinical observation permits one to believe that the pneumogastric nerve is not entirely unconcerned in the production of these reflex symptoms. 4. These cardiac and pulmonary phenomena are observed to occur only with the milder dyspeptic troubles, and are never met with in the course of the more serious affections involving tissue changes (chronic inflammation, organic degeneration, etc.). 5. The above-described symptoms are met with usually in individuals whose nervous system is most impressionable. Women are more often affected than men (in the proportion of three to two according to the author's observations). Chlorosis and hysteria are predisposing causes. 6. The dyspeptic conditions giving occasion to these cardio-pulmonary symptoms are, as regards the stomach, simple idiopathic catarrh, and dyspepsia consequent upon tuberculosis, kidney disease, uterine affections, and heart disease; as regards the bile-ducts, catarrhal jaundice, biliary calculi, etc. 7. The prognosis, as a rule, is not grave, but the phenomena are subject to a recurrence in persons who are careless on the subject of alimentary hygiene. When the primary cause persists for a long enough time (as, for example, in impaction of a calculus in the bile-duct) and the dilatation of the heart is extreme, tricuspid insufficiency may be produced, and the patient may finally succumb to cardiac disease. 8. An exclusively milk diet is the only efficacious remedy. It works wonderfully well in gastric dyspepsia, but its action is indifferent and inconstant when the liver is the cause of the digestive troubles.—*Journal de Médecine de Paris*, June 9, 1883.

THE BILIARY CAPILLARIES.—The precise histological structure of the capillary network of bile-ducts in the lobules of the liver has not been satisfactorily settled. Is there a special epithelioid lining to these minute channels or not? M. Kanellis has communicated to the Académie des Sciences a note of some investigations made on the livers of rabbits with the aid of injections of nitrate of silver. The conclusion at which the histologist arrived (*London Lancet*) was to the effect that there does exist a flat, thin, tesselated epithelial lining of the ultimate biliary canaliculi, and that the larger ducts possess a coat of prismatic cells. This observation is believed to afford grounds for a belief in the existence of a distinction between the biliary and glycogenic functions of the liver; the epithelium of the biliary channels presiding over the functions of bile secretion, while the hepatic cells proper are devoted to the formation of glycogen. When the small size of the intralobular biliary capillaries is borne in mind, the determination of the presence or absence of a special epithelial lining, even with the aid of injections of argentic nitrate, will certainly not seem to be an easy matter, especially when we remember that an inference in histology is seldom or never a matter of direct observation. The distance, too, between such cells of doubtful existence and the genuine hepatic tissue is so infinitesimal that the relegation of one function to one structure must be an act of discrimination of so delicate a nature that we do not think much weight ought to be attached to the suggestion offered.

THE CAUSATION OF MUSICAL CARDIAC MURMURS.—As a result of observations extending over a considerable period of time, Professor Schrötter communicated to the Vienna Medical Society (*Allgem. Wien. Med. Zeit.*, No. 1, 1883), his views on the causation of musical murmurs heard over various parts of the heart's area. Following Hamernik, he regarded the fine, musical, high-pitched note sometimes observed over the left ventricle as due to the abnormal tension of one or more chordæ tendinæ, and demonstrated in illustration thereof the heart of a man of forty, in which a fine, tendinous thread traversed the cavity of the left ventricle. In some other cases, however, viz., those of musical murmurs heard over the aortic area, similar conditions have been observed, especially in perforated aortic valves, a thin, tendinous thread corresponding to the free edge of the valve being left free to vibrate in the current of blood. Such perforated valves are not uncommon, but it is only in the cases where the thread-like margin is able to be vibrated that the musical sound is produced.

TEST FOR IODINE IN THE SYSTEM.—Dr. Starke makes use of the following test to ascertain whether his patients have followed his directions when he prescribes iodides. It might also be made use of by a physician to learn whether a patient has taken iodides against his wish. He lets the patient spit on a strip of white paper and then spreads some calomel over it, or he sprinkles calomel on any sores that the patient may have. The calomel turns bright yellow if there is any iodine in the system.

CALOMEL AND MICRO-ORGANISMS.—Dr. Vassilieff has published some interesting researches concerning the action of calomel on the contents of the intestines (*Zeitschr. für Physiol. Chemie*). He alleges that he has proved that this drug leaves the gastric, hepatic, and pancreatic secretions absolutely unchanged. But it prevents certain processes of retrogressive metamorphosis and putrefaction, by destroying bacteria and micrococci naturally present in the alimentary canal. Hoppe-Seyler has rightly attributed the bright green color of calomel stools to the presence of unaltered bile in the fæces. Under normal conditions the coloring matter of bile is destroyed in the process of digestion. But Dr. Vassilieff argues that calomel prevents this destruction, and the coloring material remains to give to the fæces their peculiar hue under these conditions. The pancreatic secretion is peculiarly complicated, and particularly liable to very rapid decomposition, with the consequent formation of indol and allied products. Calomel entirely prevents this change, and also alters the characters of the gases evolved in the process of pancreatic digestion, especially diminishing the evolution of carbonic acid. Experiments on artificial pancreatic digestion proved that, when calomel was mixed with pancreatic juice, proteids, starch, and fats were all acted upon in the usual manner, trypsin, amylopsin, and steapsin being unaffected by the drug, but indol, long recognized as a product of decomposition, is not formed. Dr. Vassilieff, in a further series of experiments, found that this prevention of decomposition was due to the distinctly aseptic and antiseptic properties with which calomel is endowed. He discovered that it prevented the formation of bacteria and micrococci in food removed from the intestines and freed from these micro-organisms, and that it also destroyed them where they were present. Dr. Vassilieff administered fifteen grains of calomel to a dog, in two equal doses, and killed the animal a few hours after the second dose. The contents of the intestine were collected and analysed with every precaution. No indol or phenol could be found, but much leucin and tyrosin, generally destroyed at an early stage of digestion, were detected. This experiment appears to have been repeated more than once. Other experiments, with cheese, showed that calomel prevents butyric acid fermentation.

CREDÉ'S METHOD.—The value of Credé's method of expelling the placenta has recently been tested by comparative trials. Fehling used Credé's method in ninety cases. The placenta was left to come away itself in ninety-five cases. The following were the results: In the first series (Credé's method) the average loss of blood for each patient was five and one-half ounces. The time before the placenta came away averaged 7.7 minutes. In the second series the average loss of blood was six and seven-tenths ounces. The time before expulsion was 13.4 minutes. In eighty-five of the ninety cases treated by Credé's method the membranes came away entire. In ninety-one of the ninety-five cases left alone the membranes came away entire.—*Ohio Medical Journal.*

TREATMENT OF INFANTILE GASTRO-ENTERITIS.—From observations made in the Children's Hospital, at Pesth, Dr. Epstein concludes (*Prager Medic. Wochens.*) that a liquid diet, poor in fatty matters, is the basis of treatment of gastro-enteritis in young infants. He recommends particularly an albuminous lemonade, obtained by beating up the white of an egg with a pint of water, previously boiled, the resulting mixture being then carefully filtered. At the Pesth hospital this is prepared fresh three times daily, and is kept in a bottle well corked and placed on ice. In a word, all precautions are taken to prevent the introduction of micro-organisms into the system. Nursing from the breast should be completely stopped for the first few days. Every three hours two ounces of milk at a lukewarm temperature may be given to the child, either with the bottle or by spoonfuls. The child should not be put back to the breast until the loss of flesh, which is considerable at first, commences to diminish. Again, when at the commencement there is violent vomiting and rejection of yellowish curds, Epstein washes out the stomach daily, for from eight to fifteen days, by means of the œsophageal tube. As regards direct remedial measures he employs the following potion:

℞. Sodæ et magnes. benzoat..... ʒiv.
Sp. vini gall..... ℥ ss.
Aquæ..... ℥ vj.
M. Sig.—Teaspoonful every two hours.

CONGENITAL DIVERTICULUM OF THE LEFT VENTRICLE.—A rare and curious example of cardiac abnormality has been recorded by Dr. Gibert (*Le Progrès Médical*, June 9, 1883) as occurring in an infant who lived to the age of ten months. The child was born with a ventral hernia, the abdominal wall being defective in the middle line from the umbilicus upward. A large pulsating vessel was noticed to be present together with the hernia, and as time went on this vessel increased in size till at the time of death it was as large as the finger. On examination it was found that the diaphragm was also defective, so that the pericardium opened into the peritoneal cavity, and projecting into the abdomen was a pouch-like diverticulum, connected with the apex of the left ventricle, with muscular walls, and internally marked by fleshy columns like the ventricular cavity itself. This diverticulum was thirty-eight millimetres in length, and shaped like the finger of a glove. Dr. Gibert suggested that the non-closure of the ventral wall was probably due to the presence of this cardiac deformity. But the converse hypothesis, that the pouching of the ventricle depended on the defect of the diaphragm and abdominal wall, seems to be held by Dr. Blanchard, who made a further dissection of the specimen, for he speaks of it as being the congenital formation of a kind of true infundibular form of aneurism of the apex of the left ventricle—a fact the more curious, because at that period of life the left ventricle only plays a very subordinate part, and this protrusion of a portion of its wall cannot therefore be attributed to an excess of internal pressure. However, we are not aware that in any recorded case of pericardial deficiency a similar ventricular

aneurism has been observed. Dr. Peacock, who refers to several cases of defect of the pericardium, including the classical one referred to by Baillie, makes no mention of such an abnormality in his work on "Malformations of the Heart."

GRUBS IN THE INTESTINES.—No insect, properly so-called, has ever been proved to take up a permanent abode in the human alimentary canal. Their presence, whey they were found, was accidental, as when swallowed on a piece of meat upon which the eggs had been deposited. But occasionally larvæ may give trouble. Dr. Wacker (*Med. and Surg. Reporter*) has published the case of a boy, aged twenty-one, with colicky pains, fulness in epigastrium, constipation, and frequent fits of nausea and tendency to syncope, especially when in a close atmosphere, such as that of his cottage or a stable. Dr. Wacker prescribed some Hunyadi János water, to be taken every morning on an empty stomach. On the third day a vast mass (over two litres) of larvæ, partly alive and partly dead, was passed from the rectum. The patient at once recovered, feeling no more unpleasant symptoms, even when in a hot room. On examination, the grubs were found to be larvæ of a common dipterous insect, *anthemyia cuniculinæ*, closely allied to the house-fly and blue-bottle fly.

VESSELS AND NERVES.—The nervous system dominates not only the physiology but also the pathology of the highest animal organisms. This fact is a corollary to at least two important principles—the indivisibility of physiology and pathology, and the supreme importance of the neural tissue in all the superior classes of animals. The truth and the value of these considerations can receive no better illustration than the all-powerful influence of the neural apparatus in the production of disease of the various tissues. A careful and valuable series of experimental researches on the influence of the nervous system in the causation of disease of the vessels has been contributed to a recent number of Virchow's *Archiv* by Dr. Lewaschew, of St. Petersburg. The conclusions at which this experimenter arrives are definite, and correspondingly easy of comprehension, especially in the light of what we already know concerning the origin of tissue changes as the result of neurotic lesions. The method of investigation is worthy of mention. Generally the chief nerve-trunks of the hinder extremities of dogs were the parts subjected to irritation by means of a solution of muriatic or sulphuric acid. It was found that rabbits and cats were unfit for this continuous form of stimulation, because the action of the acid on the exposed nerve-trunk brought about gangrene and, as a strong stimulus was wanted, milder means could not be employed. The observer then noted chiefly the vaso-motor changes which ensued. But the most important part of the research consisted in the examination of the various vessels which received their nerve supply from branches of the irritated nerve-trunk. The most satisfactory results were obtained from the sections hardened in picric acid and stained with logwood. The alterations were most advanced in the smaller vessels—in those provided with a good coat of muscular tissue. The duration of the constant irritation was variable, some animals being examined, after a few months, whilst others lived for a year and a half or more. The microscopical examination of the vessels of the limb experimented on was compared with that of those of the other limb, which had been under precisely the same conditions, with the exception of the special form of irritation. No change was detected in the unirritated limb. It must first be mentioned that the pathological changes found in the vessels of the limb operated upon were not equally distributed over all parts of the vessel, but the areas of disease, of varying size, were separated by areas of sound tissue. The investigation of the arteries of animals in which the sciatic nerve had been stimulated a moderately short time, or in the least affected vessels of those animals in which the stimulation had endured for a lengthened period, resulted in the detection of alterations chiefly of the adventitious coat. New formation of vessels, with the presence around them of a great number of indifferent cells, was observed; and this process was seen to extend itself more or less into the muscular tissue, whereby the bundles of plain muscular tissue were separated from one another. In vessels which had been irritated for much longer periods, a development of connective tissue which had undergone fibrillation and had displaced and destroyed the middle coat was witnessed. In brief, the changes detected were those of periarteritis, mesarteritis, and endarteritis, in the order here mentioned. Such inflammatory alterations are of great importance in the production of aneurisms, and the bearing of these recent experiments on vascular pathology is too evident to need a long description. The ascertained relation between the pathological processes in nerves and the diseases of the vessels suggests an explanation of the frequent disease of the cerebral vessels. The similarity of the lesions described above to those which have been delineated by various histologists need not lead to the conclusion that *all* fibroid vascular diseases are the result of nerve irritation; it must ever be borne in mind that a variety of causes may produce identical results.—*The Lancet.*

A THREE-BARRELLED PENIS.—Dr. Luxardo describes a rare anomaly of the penis which he observed in a young man under treatment for gonorrhœa. The meatus presented three openings, which corresponded to as many distinct urethral canals. The upper one gave passage exclusively to seminal fluid, the lower one to urine. The middle tube appeared to communicate with the lower one. The gonorrhœa affected only the two inferior canals.—*L'Union Médicale*, No. 54, 1883.

A CASE OF PRIMARY MONOMANIA.—The circumstances connected with the trial of Guiteau brought prominently to notice a peculiar form of insanity, the so-called primary monomania. In view of the professional interest attaching to this variety of mental disease, the publication of the case reported by Dr. C. B. Burr, of the Eastern Michigan Asylum, in the July issue of the *American Journal of the Medical Sciences*, is timely, and attracts attention on account of the resemblance it bears to that of Guiteau. Disregarding the moral traits of these two individuals, their cases are strikingly similar. In contradiction of the oft-repeated assertion that the execution of an insane criminal now and then has a deterrent effect upon others of like propensities, Dr. Burr's case may well be cited, inasmuch as his homicidal assault was made less than five months after the hanging of the murderer of the President, and in face of the strong popular sentiment against the so-called "cranks" and lawless fanatics. There are few more striking illustrations of the impotency of moral and legal measures to restrain or control a morbid impulse than is afforded by this case.

A CASE OF CARDIAC ANOMALY.—Dr. Horace Grant, of Louisville, reports in the July number of the *American Journal of the Medical Sciences* a remarkable anomaly of the human heart, interesting not alone from its striking singularity, but as well from its clinical importance. In a post-mortem examination of a mulatto girl, sixteen years of age, the right ventricle was found to communicate directly with the aorta; no pulmonary artery was to be seen attached to the heart. The left auricle was normal; the left ventricle presented only one-half the usual attachment of the aorta. In a word, both ventricles opened with equal freedom into the aorta. At the pericardial attachment to the aorta two arteries were given off, each about one-fourth of an inch in diameter; they passed right and left backward from the front of the aorta, and evidently supplied the blood to the lungs. This curious anomaly is discussed in connection with the clinical symptoms observed during life.

Reviews and Notices.

HANDBOOK OF THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT, NOSE, AND NASO-PHARYNX. By CARL SEILER, M.D., Lecturer on Laryngoscopy, at the University of Pennsylvania, etc., etc. Second Edition, thoroughly revised and greatly enlarged. With seventy-seven Illustrations. Small octavo, pp. 295. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS edition is twice as large as the first, containing new methods and much original matter. While making extensive additions to the wood-cuts, it would have improved the work to have omitted more of the old ones. The position of the mirror shown in Fig. 3, resting high upon the forehead, instead of a perforated reflector over the eye, is probably an oversight or a relic of the author's abandoned methods, since it is entirely at variance with laryngoscopy as now practised. The author's ingenious utilization of electrical incandescence for laryngoscopy and rhinoscopy has paralleled if not preceded the invention of a somewhat similar instrument by the French electrician, Trouvé. His convenient disposal of the various forms of laryngeal paralysis by employing the frequent symptom "aphonia" is hardly justifiable. Even a division of paralyses constructed upon modified symptoms, as aphonia, dysphonia, and altered voice, must prove inferior to one based upon motion. Attention is attracted to an original anatomical feature in the larynx, a cartilage described as running along the edge of the cord on a line with the processus vocalis. It only occurs in the female, and we fail to find it mentioned in the literature of the subject. The anæsthetic effect of nitrate of silver applied in full strength to mucous membranes is a therapeutical point first discovered by the writer. There are several wood-cuts of instruments shown for the first time in book-print. Among them we observes the Burgess blow-pipe, recommended for the practice of atomization, also a very useful automatic hydraulic air compressor.

We do not agree with the author in taking exception to text-books which refuse to recognize the existence of ulcers due to catarrhal changes in epithelia. His explanation of hypertrophic changes in chronic coryza, produced in part by catarrhal proliferation of cells, does not completely harmonize with this statement. Undoubtedly, the abrasion caused by the constant removal of adherent inspissated mucus may result in perforation of the nasal septum. This passive condition is, acurately speaking, no more an ulcer than the erosion caused and kept up by the pressure of a markedly deviated septum. The chapter on "catching cold" is a well-arranged and ingenious explanation of this common phenomenon. Decided preference should be given to the section devoted to diseases of the nose. New and original ideas are constantly presented to the reader, and the matter is conveniently and attractively arranged. Nasal medication receives ample attention, the surgical treatment of diseases of the nose being more fully considered on account of the positive result obtained. A galvano-cautery apparatus, convertible at pleasure into a galvanic or faradic battery, is probably the most interesting of the author's inventions.

Among the illustrations is a powerful sewing-machine electric motor, recommended as a convenient substitute for the surgical engine. Jarvis' operations are advocated by the author. Some of the new wood-cuts representing hypertrophic changes in the nares seem to have originated more in the draughtman's memory than from clinical experience, judging from the appearance of Figs. 49, 56, and 57. A number of the wood-cuts, however, are well and correctly executed. Taken in its entirety, the work may be considered as one of the most satisfactory and complete manuals on this subject. There is abundant evidence that it is not an effort of mere compilation, but also the result of original thought and careful investigation. The faults of omission and commission are not numerous or serious, and are more than counterbalanced by the merits of the work. The simplicity of the style and freedom from technicalities recommend the book to the beginner, and the valuable information, representing the experience of a well-known authority on diseases of the throat, makes it a desirable addition to the library of the advanced reader.

HANDBOOK OF ELECTRO-THERAPEUTICS. By DR. WILHELM ERB. Translated by L. PUTZEL, M.D. With thirty-nine Wood-cuts. New York: William Wood & Co. 1883. Wood's Library of Standard Medical Authors.

THE publishers have done a good service by presenting a translation of this book to American readers, since it is probably the best work on the subject of electro-therapeutics, considered especially from a scientific standpoint, yet published. A certain amount of humbug has always surrounded the therapeutic application of electricity, and it is refreshing to find an author who endeavors to measure everything as much as possible by physical and physiological law. Very nearly one-half of the present work is devoted to electro-physics, electro-physiology, electro-diagnosis, and general electro-therapeutics. These parts are particularly good. Few practitioners yet appreciate the value of electricity as a help to diagnosis and prognosis; and no doubt Erb's work will do something to call the matter to their attention.

Some of the principal things which the author insists upon are the use of galvanometers, of large electrodes, and of the polar method. Under special electro-therapeutics the author tries evidently to give a fair estimate of the value of electricity in each disease. Every electro-therapeutist, however, when he becomes a writer, is apt to become biassed in favor of the potent agent concerning which he discourses. Erb has not entirely escaped this fault. Furthermore, we might complain at his too ready acceptance of cases reported by such quasi-authorities as Neftel, Benedikt, and Clemens.

A TREATISE ON INSANITY IN ITS MEDICAL RELATIONS. By WILLIAM A. HAMMOND, M.D. New York: D. Appleton & Co. 1883.

THE appearance of numerous works upon insanity during the last two or three years is a striking evidence of the increased interest everywhere taken in this subject. The works of Voisin and Luys in France, of Krafft, Ebring and Arndt in Germany, as well as of three treatises published almost simultaneously in America, are sufficient proofs of the fact referred to. The present work of Dr. Hammond's is likely to attract particular attention, both because of its being the first American work upon insanity, and of the well-known ability of its author. Dr. Hammond has the faculty of presenting every subject which he touches in a clear, interesting, and positive manner, so that the reader can hardly fail to be impressed, and (at least if non-expert) to be decidedly affected by his views.

In the preface of his work the author states the opinion which he has expressed with much positiveness before, that the ordinary conception of insanity is much too narrow, that a slight mental aberration is as truly insanity as is acute mania. Many persons, however, with but slightly unhealthy minds are, he believes, responsible. He would, therefore, make a division practically between "medical" insanity and legal insanity. The point thus made is a most important one.

It may be remarked, however, that the attempt to include under the technical term "insanity" all individuals whose minds deviate markedly from the normal, would oblige us to include nearly all constitutional criminals and a vast number of persons with inherited or acquired neuropathic constitutions, the "cranks," the markedly eccentric and the moral imbeciles, *e.g.*, Pascal, Samuel Johnson, Henry Bergh, and Dr. Tanner. We would be deluged indeed with this medical insanity. It may be

questioned, therefore, whether it would not be better to give to this class another name, indicating that their mental impairment is differently accentuated. Yet, after all, the question is not of fundamental importance. In time, society will learn to treat all bad and all eccentric men, as well as all insane men, as really sick men.

Dr. Hammond begins his treatise with a section on the Physiology and Pathology of the Human Mind. His psychology is of the simplest kind. This is a merit which few others have attained, and it is attained at the expense of some inaccuracies. The mind, says our author, is a compound force, made up of perceptions, intellect, emotions, and will. We confess that this simple analysis disturbs our previous psychological views a good deal. Perception, according to the author, is the force which places the individual in relation with external objects. Its seat is thought to be in the optic thalamus. It is the starting-point of ideation; it is not inherently associated with consciousness.

It is evident that the writer has confused the terms perception and sensation; and we think that mental process can be explained without the use of the latter term. Indeed, of the two we might better abandon the term "perception," as the elder Mill did.

Sensation is the simplest form of consciousness. A simple sensation is the consciousness of a single sensorial impression. Only brutes and infants have it. Our sensations are generally the compound of a number of sensations—sensation-clusters, so to speak. Perception is the process by which a fresh sensation is united to or correlated with previously registered impressions. By its aid ideas are formed, and ideation and ratiocination take place. Neither perception nor sensation are located in the thalami, for they are associated with consciousness, though doubtless these ganglia are closely associated with the elaboration of the ingoing impulses which are the raw material of the mental phenomena in question.

The definition of will as a special mental force is perhaps practically necessary, though the tendency at present is to do away with the word and substitute that of "volition," which indicates action rather than special power or choice. There is no such thing as free-will, which, as Arndt says, "is the shibboleth of the ignorant; and a will not free is no will at all." What is known as will is rather the resultant of certain antecedent forces which can not always be analyzed.

We have discussed this part of Dr. Hammond's work at perhaps undue length. We have felt justified however, in so doing, because his psychological divisions are made the basis of his future classification and symptomatology. The fact that they are not rigidly accurate is, therefore, important to point out.

The remainder of the section in question is devoted to such subjects as the Influence of the Mind upon the Body, Eccentricity, Idiosyncrasy, Genius, Habit, Temperament, Constitution, Hereditary Tendency, Age, Sex, Race. Much more space than usual, and perhaps than is needed, is devoted to these various subjects. We confess, however, that we do not ourselves regret it, since they are written in an attractive style and show the results of a most extensive reading, observation, and thought.

The second section contains two chapters upon the Nature and Seat of Instinct. The discussion of the nature of instinct contains a good many quotations which are interesting but inconsequential. The author's own definition and view are unquestionably correct. His attempt to locate instinct in man in a particular part of the nervous centres can hardly be considered successful. Instinct is the expression of a nervous mechanism whose paths and centres are probably extensive, and not to be definitely circumscribed. We might make the same criticism of the section upon Sleep, viz., that it is an unnecessarily long, though an instructive one. We are surprised not to find among the numerous authorities quoted the name of Preyer. While the author has undoubtedly established the fact that in sleep there is a cerebral anæmia, he strangely enough still insists that this anæmia is the primary cause of the condition. The blood-vessels, however, are the servants of the nervous system and cannot decrease in calibre except at its bidding.

The last section is upon the Description and Treatment of Insanity. We find that before reaching it we have already exceeded our allotted space. We can only say now, therefore, that though much elaborated and improved it is based mainly upon the chapter on insanity in the author's work on "Nervous Diseases" (earlier editions). There is no doubt that, whatever its deficiencies, it will give the general practitioner a clearer idea of insanity than he can get from any other book in the English language.

We can, on the whole, heartily commend Dr. Hammond's book to our readers. While the author is not a trustworthy guide in all the subjects which he touches, yet his errors are not dangerous, and the book in its entirety is so broad in scope and so full in material that it will be an education for the physician who reads it.

INSANITY: ITS CAUSES AND PREVENTION. HENRY PUTNAM STEARNS, M.D. Pp. 248. New York: G. P. Putnam's Sons. 1883.

THIS work is not a scientific treatise intended for physicians alone, but is rather a contribution to an important branch of sociology. It consists of a series of essays upon the nature of insanity, the various influences which produce it, and finally upon its prevention. These essays are pleasantly written, and contain in some instances evidences of considerable research. In most instances however, the chapters are simply the impressions and opinions of a man of wide experience, rather than the results of special study and investigation. The tone of the book is throughout healthful and sensible, and we are very glad to know that the work is widely circulated as it certainly deserves to be.

LA CIRCULATION DU SANG. Examen critique de la Théorie Régnante. Sur le Mouvement Circulatoire du Sang, et Essai sur la Théorie par laquelle on doit la remplacer. Par le DR. RAMON TURRO. Traduit de l'espagnol par JULES ROBERT. Paris: O. Doin. 1883.

THE author endeavors to prove that the arteries have an independent rhythmical contraction which consists in the propulsion of the blood.

A HISTORY OF TUBERCULOSIS, FROM THE TIME OF MORGAGNI AND LAENNEC TO THE PRESENT DAY. By DR. ARNOLD SPINA, First Assistant in the Laboratory of Professor Stricker, Vienna. Translated, with Notes and Additions, by DR. E. SATTLER, M.D. Cincinnati, O.: Robert Clark & Co. 1883.

THE publishers state that the first five chapters of this book are a free translation, with a few notes and additions, of the first of the very valuable work of Dr. Arnold Spina, which has just appeared in Germany. Every careful medical reader of to-day knows that Spina is the most formidable critic and opponent of the theory advanced by Koch concerning the Tubercle Bacillus. To these chapters Dr. Sattler has added two which contain an account of the investigations of Koch and of the various subsequent experiments of other investigators; also a full description of the latest experiments of Dr. Spina, in which he claims to have disproved Koch's theories, together with Koch's reply. The book, therefore, gives the position of the combatants down to March, 1883, and is a monograph of 184 pages, well printed upon good paper. It is one of the most concise *résumés* of what has been said concerning the pathological anatomy and histology of tuberculosis.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from July 28, 1887 to August 4, 1883.

TURRILL, L. S., Major and Assistant Surgeon. Granted leave of absence for one month, to commence September 1, 1883. S. O. 77, Department of the Platte, July 26, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 4, 1883.

COLES, J., Surgeon, ordered to the Naval Hospital, Philadelphia.

MARSTER, E. H., Passed Assistant Surgeon, detached from the U. S. S. Hartford and granted sick-leave.

BRAN[illegible], J. F., Passed Assistant Surgeon, detached from the Naval Academy and ordered to the Hartford.

BOG[illegible], S., Medical Inspector, detached from the Navy Yard, Norfolk, on August 30th, and ordered to the U. S. S. Trenton, September 1st.

T[illegible] N. McP., Passed Assistant Surgeon, detached from the Navy Yard, Norfolk, on August 30th, and ordered to the U. S. S. Trenton, September 1st.

DER[illegible]OD, J. D., Passed Assistant Surgeon, ordered to the Trenton, September 1st.

TO[illegible], B. H., Surgeon, detached from the Naval Hospital, Port Royal, and ordered to the Navy Yard, Norfolk, August 30th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Reports of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 7, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 31, 1883.....	4	43	29	6	52	22	0	0
August 7, 1883.....	1	46	32	1	49	34	0	0
Deaths.								
July 31, 1883.....	1	8	4	6	12	17	0	0
August 7, 1883.....	1	10	2	3	12	18	0	0

HOW, IN A CROWDED PROFESSION, BANGS GOT A START.—The little village of Millbrook was disturbed in its calm serenity by the advent of two new doctors. Now there will be more sickness, people said, for so many doctors must find work to do. From time immemorial Millbrook had never had so many physicians before. Not that three medical men might not be well supported, for Millbrook and vicinity numbered twenty-one hundred inhabitants; and is it not a (social) law of nature that every seven hundred people must support one doctor? Four doctors, however, were one too many, and only the strongest and fittest would survive in the struggle for existence.

Brown and Bangs were the new-comers: Brown from the important medical college of Grande Montagne; Bangs from the little *one-horse-power* concern of Camperdown. Brown had the most titles. He was an A.B. and an U.D.M.C., the last two letters meaning master of surgery. Bangs had done no good work at college, but had somehow managed to get through with a diploma in classic sheepskin, and in Latin, signed by ten professors, which hung in his office in an elegant frame. Brown's friends said that Bangs could never succeed, for in medicine, as in *Sabbath-school library books*, it is always the good boy and good student that is rewarded, while the bad boy that shirks his lessons and "slopes" examinations comes to grief. Besides, Bangs' diploma, coming from *such* a school, would be no help to him, while Brown's Grande Montagne diploma would powerfully recommend him to favor. So Brown's friends thought, and so it seemed to Brown. Moreover, it was known to a few that Brown had written a prize thesis of great merit on "Pityriasis Versicolor," which contained some original drawings, and in which the parasitic origin of this cutaneous affection was ably maintained. He had also made some personal investigations, while a hospital interne, of that curious insect the sarcoptes hominis, in which the habits and habitats of the parasite were well described. As a therapeutic measure he had proposed the ingenious plan adopted by hunters in the case of wolves, of smoking the little animal out of his haunts by the fumes of burning brimstone applied to the orifice of entrance. There was, however, nothing especially new in this medication (as was very properly pointed out by the faculty), sulphur having been for more than a hundred and fifty years, from empirical considerations, employed against this common pest of mankind. Brown was well grounded in the general principles of therapeutics, but he had not yet learned that while sound theories are very necessary in applying them to practice, you have the whims and caprices of the patient to contend against, and that you never really have *diseases* to treat, but only *sick people*. Symptom-treating, he believed, was irrational; you must seek out the diathesis, and "go for" it; find the point of departure of the morbid phenomena, and attack it, rather than the symptoms, which would disappear with the disappearance of their cause. This is very good theory, but is not to be followed too rigidly. If Bangs had any theory of therapeutics, it was that symptoms are the key to disease, and the physician's highest art is to attend to and treat symptoms. A furred tongue generally requires an evacuant; pain calls for an anodyne; diarrhœa a corrective or an astringent. Bangs had pored earnestly over certain treatises on "Specific Medication," believed a thousand or more unproved and very doubtful statements contained in them, and thought himself on the path of progress.

Brown believed that his services would be in demand, and that he might "select" his patients and patrons. Bangs was willing to take "anything and everything that came along," and improve every opportunity to "rush in where angels might fear to tread." It was a boldness and an impudence that very often in this misconstructed world give success. To cut short our tale, Brown did not obtain a foothold in Millbrook, and left discouraged in less than six months. Yet he might have succeeded but for two circumstances. Do you wish to know what these were?

He had not been in Millbrook many weeks when, one stormy evening, late in autumn, a messenger came in hot haste for a physician—one of the Wilsons, of Dogtown, ten miles distant. The weather was cold, and the road very muddy. There was a sick child in Dogtown, and the case was urgent. Dr. Grimes would not go on account of the roads, and Clay, the homœopath, had declined for the same reason. Brown, too, declined, when he was informed that the pay was doubtful. He would not expose himself to such inclement weather "with an uncertainty before him." Here he made a grave mistake, as we shall see. Bangs was summoned, and in five minutes time was ready, equipped, and in his saddle. In one hour and ten minutes he had gained the cottage of his patient. It was a case of typhoid fever, and the sick girl had been suffering from a prolonged

attack of epistaxis. Bangs plugged the nostrils (he fortunately had a flexible catheter in his pocket) and stopped the hemorrhage. He came the next day and the next, and so on, and the little patient eventually recovered. His brilliant surgical operation of tamponing the nostrils (which had never before been performed in that part of the country) gave him great repute in Dogtown, and henceforth he could claim all the families of that rural district as his. This was an excellent start for Bangs, and one that he well improved. The fever proved epidemic in Dogtown, and that very year Bangs scored one hundred and fifty visits to that distant agricultural settlement. This professional work, at three dollars a visit, gave his small family for a long time a comfortable support.

"Aunt Jane Hopkins," as she was familiarly called, was a spinster of large influence in Millbrook. Brown, who early in his professional career had been honored by being consulted by this mistress of gossip, had severely offended her by making light of the back-ache, the side-ache, and a host of neuropathic troubles. He had recommended a diet treatment for her dyspepsia, when Aunt Jane knew that she needed medicine. He had even called her neurasthenic ailments *hysteriform!* and had counselled greater firmness of will.

Aunt Jane gave him up in disgust, and called in Bangs. Here was just the man who could enter into sympathy with her infirmities, and who had a specific for every symptom. She was "doctored" for "womb trouble," and "spinal irritation," and "dyspepsia," and "liver complaint," and finally got well after taking six different kinds of medicine daily for eight weeks! Henceforth Aunt Jane acted as though her principal mission in life was to sound the praises of her favorite physician. Those who know anything about the elements that usually constitute village society, can well appreciate the benefit that Bangs derived from such persistent advertising among the gossips of Millbrook.

In short, Bangs' bread was soon "buttered on both sides," and Brown, as before said, left discouraged.

INDICATIONS AND CONTRA-INDICATIONS FOR THE USE OF DIGITALIS IN MENTAL DISEASES.—Dr. Pedro Ribas, in an article published in the *Revista frenopatica Barcelonesa*, gives the following as the indications and contra-indications for the use of digitalis in mental diseases:

Indications.—1. In acute mania with anæmia, dilated pupil and feeble heart-beat. 2. In chronic mania of tranquil form, especially in those cases characterized by hallucinations of sight and hearing. 3. In hypochrondriacal mania, especially where thoracic and pulmonary troubles are complained of. 4. In suicidal mania and melancholia. 5. In religious ecstasy and fear. 6. In the melancholy and depressive stage of general paralysis, especially if anæmia be present. 7. In simple, primary dementia.

Contra-indications.—1. In acute, violent mania. 2. In simple, chronic melancholia. 3. In cataleptic ecstasy. 4. In most forms of general paralysis.

Dr. Ribas, as will be seen, draws some fine distinctions. —*El Siglo Medico*, April 1, 1883.

THE DIFFERENT KINDS OF QUACKS.—According to the *Gazette Hebdomadaire* the genus of the quack varies in France with his nationality. It may be interesting to know that the American quack, as he flourisheth abroad, is "high in color, loud in voice, noisy and impudent." That is the rôle he usually plays also in this country, but he does not confine himself to it. In his great versatility he adapts himself to the peculiarities of his dupes. We have seen him pale, of smooth and delicately modulated voice and exceedingly demure. The Spanish quack abroad is, we are told, "mystic, sombre, the crucifix in hand, always ready in prayer." That lay has not been worked here to any great extent, and it might be made to pay. "The Dutch impostor, writing his consultation with a flask of urine in hand, as in the famous 'Dropsical Woman' of Gerard Dow," would scarcely be adapted to the genius of this country. There are some, however, who are favorably impressed through the urine. But the kind which carries the palm abroad, and is the peculiar abomination of the French profession, is the German quack, "surrounded with piles and electric apparatus; a professor of occult physical science; who cures with the same spark pulmonary tuberculosis and cerebral debility; a distinguished lecturer and the apostle of a newly discovered art." The latter quack should emigrate. Untold wealth awaits him here. The arrant, blatant, ignorant quack is beginning to lose his grip as our people grow more intelligent, and the "occult" would catch them. They have much more faith in the incomprehensible than they have in that which is reasonable. The theological quack has cultivated this weakness very successfully, and there is no reason why the medical quack should not find it profitable.

THE ACTION AND THERAPEUTIC USES OF ACONITINE.—Laborde has an elaborate article upon the above subject. His experience with aconitine in neuralgia is favorable but not many cases are cited.—*Journ. de Therapeut.*, May 25, 1883.

NAPELLINE AS A SUBSTITUTE FOR MORPHINE.—Napelline, an amorphous alkaloid obtained from aconite root, has been successfully used by Laborde to relieve neuralgia pains, and as a substitute for morphine in a case of the morphine habit. It was given hypodermically in doses of from one to four centigrammes in the twenty-four hours.—*Journ. de Therapeut.*

THE VALUE OF COLOR AND OF MUSIC IN THE TREATMENT OF THE INSANE.—Dr. H. Sutherland refers to Tonga's suggestion that different colors may be used advantageously in the treatment of the insane, and to Dr. Claye Shaw's view that music might also be utilized in the therapeutics of mental disease. He says: In my own experience, the efficacy of such therapeutic agents has been found to depend upon the previous education of the patient and the various crises of his disorder; a change to a more cheerful room, associated with pleasant reminiscences, often exercising a marked influence for the better on the course of the mental disorder.—*British Med. Journ.*, May 5, 1883.

THE THERAPEUTIC VALUE OF THE WATER OF LOURDES.—Drs. Labadie, Lagrave, and Dérignac, give an interesting account of a patient, a woman aged forty-five, not neuropathic, who suffered from a double otorrhœa, followed by symptoms of meningitis, epileptiform attacks, contractures, paralyses, atrophy, mental and sensory disturbances. She was treated for meningitis without success. After being in the hospital for nine months, she went to Lourdes and was immediately cured *secundum artem*. The case illustrates the diagnostic value of faith-cures.—*Archives de Neurologie*, May, 1883.

THE TREATMENT OF THE FILTHY INSANE.—Schüle discusses the measures best adapted to preventing and remedying the filthy practices and habits among the insane. It is very necessary to break up these habits and secure cleanliness whenever possible. Moral treatment, special appliances in the way of beds, hydrotherapy, faradization, coercion in some cases, are the measures recommended. The use of sedatives, medicinal and mechanical tonics, are generally indicated. Non-restraint should not be carried too far.—*Allg. Zeitschr. f. Psych. u. Psych.-Gerichtl. Medic.*, xxxvii., 6.

HYPODERMIC INJECTION OF COLD WATER IN SCIATICA.—Dr. Pollak has communicated to the St. Louis Medical Society a case of sciatica, in which he injected ice-cold water hypodermically deeply into the tissues, with the effect of speedily alleviating the pain. The relief was lasting.—*Philadelphia Medical Reporter*, February 3, 1883.

NERVE-SUTURE.—Johnson cites fifty-two cases of nerve-suture which he has found in literature, to which he adds some cases communicated to him personally. He has performed sixteen experiments in nerve-suture; uniting in these cases the totally dissevered ends of a sciatic nerve with a catgut suture. He recommends nerve suture as deprived of all danger. In fifty-two cases of the operation in man there was no bad result, and nervous conduction was established with comparative rapidity. Indirect suture is preferable to direct. Kaufmann, in 1880, successfully transplanted a dog's sciatic nerve in the human being, and from experimental results Dr. Johnson believes that this example should be followed in cases where indicated. He leaves to future experimenters to determine whether nervous conduction is established most promptly and thoroughly by suture, or, as was proposed by Vanlair, by placing between the severed ends a tube of calcined bone (*Nordiskt Medicin. Archiv, Band* xiv., No. 31).—*Weekly Medical Review.*

MEDICAL PRACTICE IN PERSIA.—Dr. C. J. Mills, an English physician who has resided for fifteen years in Persia, has recently written an interesting work entitled "The Land of the Lion and the Sun." Some of his medical experiences are given. The author had the privilege of attending Persians in their illness. At first he was astonished at receiving no emoluments, but found out that his servants pocketed his legitimate fees. One day a poor patient sends him some money inclosed in a handsome purse. The doctor returns the money, but keeps the purse. Then a rich man hears of this, pays the doctor in money, and puts it, too, in a handsome bag. The doctor keeps the money, and very much to the disgust of his patient, sends back the purse. A well-to-do baker has a cataract, and our medico cures him and receives about four ponnds for his fee. When the Persian regains his sight he insists that he is still blind, worse than ever, demands back the money, and is clamorous for an additional sum for an indemnity. The medico knows him to be a rascal, and suddenly flourishes an amputation-knife before the blind man, who at once runs away as fast as his legs can carry him. Demands were constant for quinine, and the doctor had been particularly instructed to distribute it freely when cases required the febrifuge. But the cry for quinine became so constant that the author was certain that it was obtained under false pretences. Then, as a rule, he administered it in solution, or if his servants wanted it he put it in a dry state in their mouths. THen the cry for quinine diminished. In the case of his servants, it was the legitimate *mokadel*, or perquisites of office they were after. They collected the quinine and sold it.

WHAT THE ABUSE OF MEDICAL CHARITY HAS DONE FOR ENGLISH PHYSICIANS.—A correspondent of the St. Louis *Courier of Medicine*, writing upon the subject of the status of English doctors, says: "The social position of the whole medical profession in England is much lower than it ought to be. The distinctions lavished on other professions are very rarely conferred on medical men; but the profession has itself to thank to a great extent for this difference. The amount of gratuitous work done by the profession in no way raises it in the public esteem. It is well known that it is not performed from motives of charity, but for the position which is gained by being attached to a hospital staff, and the hopes of a good practice ultimately accruing therefrom. This custom of gratuitous services to the hospitals has grown on the profession, and many a young physician and surgeon now is exhausting himself in mind and body by attending patients gratuitously at hospitals whose incomes are in some cases much greater than his own. This injustice the public, as represented by the people who support the hospitals, in nowise wish; they would be quite willing that the first charge on the incomes of the hospitals should be to adequately remunerate the medical men who attend upon the sick. But any reform in this direction must emanate from the heads of the profession. No profession can be expected to rise in social position when kept in a state of penury; and this poverty-stricken state of the medical profession, as it is in England, is a great deal due to the action of those who hold the highest position in it. They preach to the younger members, who are getting nothing from their hospital appointments, to keep up the dignity of the profession by never taking from a private patient less than their guinea or two guinea fee, when the same patient can see men of the greatest reputation and obtain their advice for the same amount. The senior men with high reputations ought never to take less than five or ten guineas; there would then be a chance of the junior members of the profession sometimes obtaining a patient."

MEDICINE IN JAPAN.—A recently published official report gives the number of physicians who have passed satisfactory examinations in medicine and surgery at 1,625; those who have not undergone such examinations, 769; those who have pursued their profession from the time when there was no system of examination, 30,700; oculists, 502; surgeon-dentists, 124; accoucheurs, 417; bone-setters, 86; licensed apothecaries, 415; those who have been in practice from the time when there were no license regulations, 6,426; government principal hospitals, 3—branches, 19; public principal hospitals, 192—branches, 40; private principal hospitals, 202—branches, 11. It will be seen from the above that by far the larger number of practising physicians are still unlicensed, and probably practise according to the old Chinese system. It must be borne in mind, however, that the regulations requiring physicians to pass an examination in anatomy, physiology, materia medica, pathology, practice of medicine and surgery, and obstetrics, and to take out licenses to practise, only came into vogue a few years since, and did not affect those already in practice for three or four years. Medical schools are now increasing in number, and consequently the number of students educated in Western medical sciences. The last annual report of the Medical Department of the University of Tokio shows the actual number of students as follows: medical students, 169 (course conducted by German professors); those following the same course in the Japanese language, 760; pharmaceutical students, 71; making a total of 1,000. There is one licensed physician to about every 22,000 of population, and one unlicensed to every 1,200; or one physician, licensed or unlicensed, to every 1,109.—*Correspondent of Philadelphia Medical Times.*

THE AIM OF LIBERAL HOMŒOPATHY is well set forth in a recent issue of the *Hahnemannian Monthly*, which says: "A few years ago the editors of the *New York Medical Times* dropped from the title of their journal the distinctive word 'Homœopathic;' now they boldly urge the renunciation of the word as applied to our school of medicine. If we are emancipated from the thraldom of *sect*, we shall not only save our school from imminent dissolution, but shall also become an integral part of the medical profession of the day, honored as true, broad, liberal, progressive physicians. But if we cling to a name which by no means represents the catholicity and spirit of the new school, we are doomed to annihilation; and more, we become the common enemy of all allopaths and also of all progressive homœopaths. The neutral ground upon which a lasting truce is to be consummated is the common acceptance of the dual action of drugs. No one denies that ipecac in one dose will vomit, and in another will allay vomiting; therefore no one will contend with another if only this plain truth is adopted as the universal motto of the medical profession."

TREATMENT OF PAINFUL THROAT.—A correspondent asks what is the best treatment for cases of "sore throat," so called, in which there is much steady pain, some dysphagia, and hardly any signs of congestion or swelling.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 7 NEW YORK, AUGUST 18, 1883 Whole No. 667

Original Articles.

THE CORPORA QUADRIGEMINA.

WITH REMARKS CONCERNING THE DIAGNOSIS AND LOCALIZATION OF LESIONS AFFECTING SIGHT.[1]

BY AMBROSE L. RANNEY, M.D.,

NEW YORK.

THE aqueduct of Sylvius (*iter e tertio ad quartum ventriculum*) is covered on its superior and dorsal aspect by two pairs of rounded eminences, mainly composed of gray matter, called the corpora or tubercula quadrigemina (the so-called "*nates*" and "*testes cerebri*"). A median groove separates these parts. Anteriorly, a transverse white prominence (the *posterior commissure*) limits this groove; behind, it is continuous with the velum by means of a small median strand of longitudinal fibres, called the *frenulum veli*. The pineal gland which projects backward and downward from the posterior wall of the third ventricle overlaps the anterior portion of this groove, resting between the two upper quadrigeminal bodies (the nates). In fishes, reptiles, and birds, these bodies are two in number, and are called the *optic lobes*. They are also hollow in these species. In the human fœtus they are developed early, and form a large part of the cerebral mass. The anterior tubercles are darker in color and less prominent than the posterior. Laterally, each tubercle is prolonged upward and forward into a prominent strand of white substance, the brachium or arm of the corresponding tubercle. The *brachia* are to be regarded as fasciculi sent to each tubercle from the cortex cerebri by means of the corona radiata. They may also be considered as affording a communication with the optic thalamus. The *upper* or *anterior brachium* passes between the inner geniculate body and the posterior extremity of the optic thalamus, or the *pulvinar*, where it may be demonstrated to join one of the roots of the optic tract, of which it really is a continuation. This is more apparent in some animals than in man. The *lower* or *posterior brachium* loses itself underneath the inner geniculate body, which is situated at the side of the upper end of the crus cerebri.

The *upper quadrigeminal bodies*, or *nates cerebri*, are covered externally with a thin layer of nerve-fibres, called the "*stratum zonale*." This constitutes the only place in the brain where fibres of the first projection system of Meynert are exposed to view upon its exterior. Beneath this may be seen a layer of gray matter, called the "stratum cinereum," which is thicker at the prominent part of the tubercle than at its margins, and which contains numerous nerve-cells of small size. Beneath this, again, lies a layer of nerve-fibres which are arranged in longitudinal bundles, the so-called "*stratum opticum*." These fibres are continuous with the upper branchium and the optic tract. Scattered nerve-cells are found between the bundles of which it is composed. Finally, between the stratum opticum and the gray matter which surrounds the aqueduct of Sylvius, a layer of nerve-fibres, derived from the upper fillet or *stratum lemnisci*, may be demonstrated. This layer is thickest at the margins of the tubercle and thinnest at the median line, where a few of its fibres decussate. This gradual thinning is to be explained by the passage of some of its fibres to the optic layer, and some to the gray matter surrounding the aqueduct of Sylvius (Tartuferi).

The *lower quadrigeminal bodies*, or the *testes cerebri*, are composed almost entirely of gray matter formed of numerous small and some large nerve-cells. A thin layer of the fillet separates the gray nucleus of this body from the gray matter surrounding the aqueduct of Sylvius. A connecting band of gray matter unites the gray nuclei of the two bodies. Transverse fibres of the fillet bind this gray commissural band both superficially and deeply. Those lying superficially are continuous, in part, with the branchium of the lower quadrigeminal body, and in part, also, with the fibres of the lower fillet; the fibres of the lower fillet are described by Meynert as being continuous with the brachium of the opposite side. If this continuity really exists, the communication is probably an indirect one by means of interposed nerve-cells in the gray matter.

The *posterior commissure* of the third ventricle, which lies above the upper end of the aqueduct of Sylvius, seems to be a direct continuation of the commissural fibres of the fillet which have been mentioned. It apparently springs from the tegmentum, and, after decussating, appears to traverse the substance of the thalamus, and then to radiate in the white substance of the hemisphere of the cerebrum. A few of its fibres are connected with the pineal gland; some also probably act as commissural fibres between the thalami.

This hasty and somewhat imperfect *résumé* of the anatomy of these bodies will enable us to intelligently consider some of the views which have been advanced respecting their probable functions, and the effects of lesions within their substance.

Functions of the Corpora Quadrigemina.—Among the investigators who have devoted special attention to these bodies may be prominently mentioned Adamuck, Knoll, Budge, Hensen, Voelkers, Flourens, Schiff, Ferrier, McKendrick, Gudden, and many others of note. Some have observed the effects of their removal in animals; others have studied the results of stimulation of their superficial and deep parts; while a few have recorded the results of destruction of the optic apparatus and certain convolutions of the cerebral hemispheres, as possessing a peculiar bearing upon points in dispute regarding these bodies. From these different sources a mass of evidence has been accumulated which appears in some instances to lead to contradictory conclusions. It is only by comparing the views of the investigators mentioned, and bringing to bear upon the subject what is also taught us by anatomical research, that the web may be partially disentangled.

The connection of the anterior quadrigeminal bodies, or the *nates cerebri*, with the optic tract and the sense of sight appears to be far more intimate than that of the posterior lobules, or *testes cerebri*, as was first pointed out clearly by Gudden. This observer found that the extirpation of the eye on one side of a young animal was followed by a degeneration and atrophy of the natis cerebri and its brachium; the testis and its brachium remaining unaltered. This view is apparently sustained also by the fact that the mole has the testes cerebri largely developed, whereas the nates cerebri are markedly atrophied. Adamuck believed that he had clearly demonstrated the existence of a centre within the nates which

[1] This article formed a part of my course of lectures during the winter of 1882-83 before the students of the Medical Department of the University of the City of New York.]

presided over those movements of the eye and pupil which are essential to the *accommodation of vision for near objects*, as well as the *co-ordination of all ocular movements*. Knoll found, however, that reflex contractions of the pupil remained after removal of the corpora quadrigemina; and Hensen and Voelkers have been apparently successful in mapping out the topography of the centres which preside over ocular and pupillary movements with greater accuracy than their predecessors. They were able to produce at will, by carefully applied electric stimulation in the region of the floor of the aqueduct of Sylvius, independent movements of the eye and pupil. In the dog, upon which animal these experiments were made, a centre which governed the *accommodation of vision*[1] was found to be situated in the posterior part of the third ventricle near to the aqueduct, while a centre for pupillary contraction and one also for its dilatation were found in the front part of the floor of the aqueduct of Sylvius, the former lying in the median plane and the latter more to the sides. The same observers state that a centre, which governs those muscles of the eyeball which are supplied by the third cranial nerve, can be found in the floor of the aqueduct, immediately behind that which presides over pupillary contraction. Whether we accept these statements as demonstrated or not, we know positively that such centres exist somewhere, and are so associated in their action that, when the eyeballs are directed inward and downward, as for near vision, the pupils are at the same time contracted; and when the eyeballs are directed upward and returned to a state of parallelism, the pupils are dilated to a corresponding extent. On the contrary, when the eyeballs are moved sideways in unison, the pupils remain unchanged. A most positive proof that the pupillary movements are not of a psychical nature is afforded by the experiments of Adamuck, who produced movements of *both eyes* by stimulation of the corpora quadrigemina of either side, and who also observed that the pupils were at the same time made to perform their proper movements. When, however, the corpora quadrigemina of the two sides were separated by a median incision, stimulation of the centres of either side caused movements of the corresponding eyeball only. In both experiments, changing the seat of stimulation caused modifications of ocular movements.

It was only after Knoll had shown that the reflex movements of the pupils remained after complete excision of the corpora quadrigemina, and the discovery of Hensen and Voelkers that the effects of stimulation of these bodies, as first practised by Adamuck, were not uniform until the *underlying parts* were directly reached, that discrepancies between these observers were explained.

To determine the true relations which these bodies bear to the special sense of sight is perhaps one of the most difficult problems in physiology.

Flourens and many subsequent observers have shown us that unilateral extirpation of the corpora quadrigemina in mammals and birds leads to a blindness of the opposite eye; and even when the cerebral hemispheres are removed without disturbing these bodies, that an apparently crude vision still remains. We have many experiments, however, to show that destruction of certain convolutions of the cerebrum also produced the most profound effects upon vision in spite of the undisturbed action of the quadrigeminal bodies. When we discussed the optic thalamus,[2] it was also stated that many clinical observations pointed toward the existence of a centre within that body which in some way modified or presided over visual impressions. We know also that lesions within the so-called "internal capsule" of the cerebrum frequently produce most serious impairment of vision, and conjugate deviation of the eyes.

[1] This centre manifested an apparent control over the *ciliary muscle* only, and created alterations in the antero-posterior measurement of the crystalline lens of the eye.

[2] This lecture was published in the Journal of Nervous and Mental Diseases, April, 1883.

Now, how are we to explain, theoretically, such contradictory phenomena? What views are we apparently justified in holding (from the standpoint of our present knowledge upon the subject) regarding the relations of the cerebral cortex, corpora quadrigemina, corpora geniculata, optic thalami, and internal capsule of the cerebrum, to the fibres of the optic tracts and the external organs of sight?

I think we are justified in attributing to the cells of the *cerebral cortex* or the external gray matter of the hemispheres alone our conceptions of the external world, as portrayed to us by means of the sensory nerves and the special senses. No matter how many collections of gray matter may be interposed along the course of the nerve-fibres which convey these impressions to the cortex (each of which may possibly help to modify them), there is no argument which has yet been advanced which tends to overthrow this general law. Every image cast upon the retina, every sound-wave which enters the external ear, every odoriferous particle which reaches the nose or is placed upon the tongue, every manner of form by which we are brought into direct or indirect relation with surrounding objects during life, becomes a *conscious impression* only by affecting in some unknown way the cells of the cerebral cortex. Here, the image thrown upon the retina becomes to our mind the picture actually seen; the sound-wave becomes the musical note; the contact of the odoriferous particle is transformed by the brain-cells found in its external gray matter into a sense of smell or of taste; objects become recognized as smooth or rough, hard or soft, heavy or light, only when these silent workers become thrown into activity by some sensory impulse carried to the convolutions of the brain by means of nerve-fibres.

We have reason to believe that the fibres of the optic nerve reach the gray matter of the convolutions of the cerebrum by different routes, and that each bundle meets (somewhere in its course) an interrupting mass of gray matter, with the cells of which the nerve-fibres become associated, and from which cells they are subsequently prolonged to those of the cortex. This is the common method of arrangement of all nerve-fibres, after they enter the substance of the brain or spinal cord, to which the optic fibres are no exception. The interrupting cells of the optic fibres are comprised chiefly within the optic thalami, the corpora geniculata, and the corpora quadrigemina. Stilling believes that a bundle of fibres can be traced to the *corpus subthalamicum*, and another to the *medulla oblongata*. The so-called "*basal optic ganglion* of Meynert" is thought by some to be also connected with a slender fasciculus of the nerve.

When speaking of these interpolated masses of gray matter and their controlling action upon all impulses sent to the brain, Michael Foster makes use of the following words, which I quote on account of their applicability to the subject under consideration:

"All day long and every day, multitudinous afferent impulses from eye, and ear, and skin, and muscle, and other tissues and organs, are streaming into our nervous system; and did each afferent impulse issue as its correlative efferent motor impulse, our life would be a prolonged convulsion. As it is, by the checks and counter-checks of cerebral and spinal activities, all these impulses are drilled and marshalled and kept in orderly array till a movement is called for; and thus we are able to execute at will the most complex bodily manœuvres, knowing only *why*, and unconscious or but dimly conscious *how*, we carry them out."

The study of the course of the individual fibres of the optic nerve in the region of the optic chiasm (Fig. 1) is rendered particularly difficult by the curved direction which they take; hence the relative proportion of the longitudinal and decussating bundles is still a subject of dispute among authorities upon that subject. Stilling states that inter-retinal fibres, which have no cerebral connection, can be demonstrated, while other authors

deny it. Some assert that all of the fibres, which are prolonged into the optic tract, decussate in man, as they are known to do in the lower vertebrates and some mammals, but pathological observation tends to confute this view. Charcot advances the somewhat attractive theory that those fibres of the optic nerve which do not decussate at the chiasm are continued along the optic tract of the corresponding side and eventually decussate, probably within the substance of the corpora quadrigemina, after which they are continued into the internal capsule of the opposite hemisphere. He sustains this theory on pathological grounds; since many recorded cases, where lesions of the internal capsule have been associated with symptoms referable to the optic nerve, have apparently demonstrated that *hemianopsia*[1] never (?) occurs. This could not be the case without a second decussation, provided the view be considered tenable that a complete decussation does not occur at the chiasm. The following diagram will make this apparent:

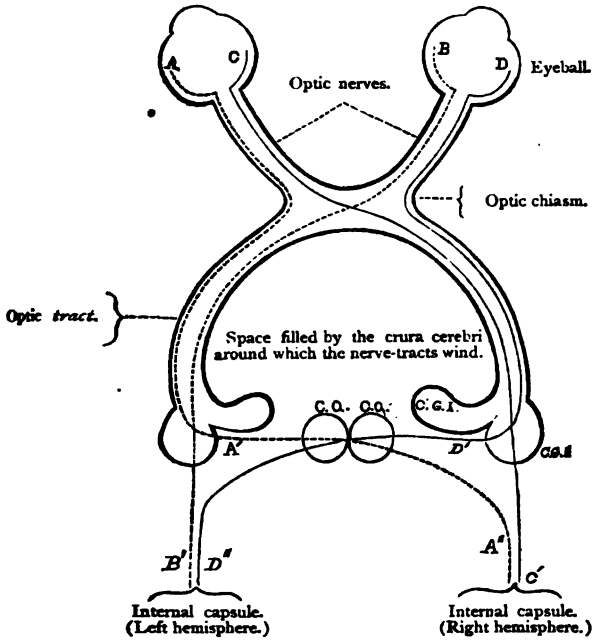

FIG. 1.—A diagram designed to show the course of fibres within the optic nerves, and some of the more important relations of the same. A, A', A'', and D, D', D'', fibres which do not cross at the chiasm, but probably do at the corpora quadrigemina. C, C', and B, B', fibres which do decussate at the chiasm. The relations of these fibres to the "internal capsule" of the cerebrum is also shown. This portion of the cerebral hemisphere is shown to be in relation with the fibres distributed only to the opposite eye; hence, lesions within it tend to produce "crossed amblyopia." The relation of bundles within the chiasm is made apparent. The fibres of the chiasm which connect the two eyes directly (inter-retinal fibres), and those which connect the two cerebral hemispheres directly (inter-cerebral fibres), are not shown, because they have no bearing upon symptoms, even if their existence is to be considered as demonstrated."

It is known that destruction of the retina in the dog gives rise to a degeneration of nerve-strands in both optic tracts. The chiasm of the cat has been divided without destroying vision, thus warranting the inference that the decussation at that point is incomplete. All the experiments which have been made to determine the relation of the cortex cerebri to vision are in favor of an incomplete decussation, because the sight of both eyes has been impaired by unilateral lesions. A large number of cases have been reported where lesions affecting one optic tract have produced hemianopsia of both retinæ.

Possibly the corpora quadrigemina preside over other functions in addition to the special sense of sight. Flourens was the first to notice that injuries of the corpora quadrigemina of one side produced peculiar phenomena, called "*forced movements*," and that the complete removal of these bodies caused inco-ordination of movement. These experiments have been repeatedly verified. In the frog, the removal of the optic lobes causes an almost entire loss of the power of *co-ordination of movements required to preserve its balance*; but it can still perform a variety of movements where co-ordination is demanded, such as swimming, leaping, etc. Schiff has attributed these effects, however, to injury of deeper parts (crura cerebri). We have already considered phenomena which are somewhat similar when the cerebellum was under discussion; and we have as yet no positive knowledge of the physiological connections between the optic lobes and the cerebellum.

The sense of sight has a marked effect upon co-ordination of movement, as we all know. Dizziness often follows the close inspection of a water-fall, or the rapid flight of objects before the eyes. The effect of extreme elevation from surrounding objects frequently produces marked disturbances of equilibrium. These facts seem to sustain the belief that the optic fibres must be closely associated with the cerebellum, pons Varolii, or crura, and the discovery of Flourens is an additional argument in its favor.

Finally, it is believed by some that a centre which presides over the secretion of sweat is situated somewhere in the region of the optic lobes.

EFFECTS OF LESIONS OF THE OPTIC CENTRES AND OPTIC NERVES.

In connection with the discussion of the corpora quadrigemina and the probable course and distribution of the nerves of sight, it seems to me an appropriate time to mention some interesting phenomena pertaining to vision which have an important bearing upon the localization of intracranial lesions. Before doing so, however, it will be necessary to hastily review a few important facts which are essential to a complete understanding of the subject. The optic apparatus may be said to comprise the following parts:

1. *Certain cortical centres*, which act as the *interpreters* of visual sensations transmitted to the convolutions by means of the nerve-fibres within the white substance of the cerebral hemispheres. These centres probably transform all impulses (which start originally as retinal impressions) into *conscious visual perceptions*.

2. *Nodal masses of gray matter*, with which the optic nerve-fibres are intimately associated before entering the white substance of the cerebral hemisphere. These masses include the corpora quadrigemina, the corpora geniculata, the corpus sub-thalamicum, the optic centre of the thalamus (Luys), the basal optic ganglion (Meynert), and probably some centres situated within the medulla oblongata. It is not possible to speak with positiveness concerning the seat of all the interpolated masses of nerve-cells associated with the optic nerve-fibres. Possibly some important ones may have been omitted, whose existence and function will be clearly demonstrated by future research. These interrupting ganglia probably exercise a *modifying influence* of some kind upon the impulses which are conducted to them from the retinæ; and subsequently allow them to pass to the cells of the cerebral convolutions so altered or *materialized* as to be readily transformed into conscious perceptions of external objects recognized by the eyes. It is not known what the special function of each of these interrupting masses is, nor can it be determined except through a more complete knowledge of cerebral architecture and pathology than we now possess.

3. *Nerve-fibres within the optic nerves* and the *optic tracts*, the latter being the prolongation of the former behind the chiasm (see Fig. 1). These fibres convey all impressions made by objects external to the body upon the retinæ by means of the organ of sight, to the interrupting masses of gray matter mentioned above. The waves of light, which enter the pupil and fall upon the retina, create in the structural elements of that membrane (probably in the so-called "rods" and "cones of Jacob") impulses which are conveyed by means of the optic fibres to the interrupting ganglion-cells, and then to the convolutions of the cerebral hemisphere where these impulses

[1] A term used synonymously with *hemiopia*; but a preferable one, since it signifies a *blindness of one-half* (lateral) *of the retina*.

become sight-impressions. It is evident, therefore, that anything which tends to interfere with the perfect conducting power of these fibres will impair the power of accurate conception of external objects revealed to us by means of vision, because the cortical centres are cut off from their retinal connections; hence the study of the course of the nerve-fibres and the relations of the nerve-tracts to surrounding parts becomes of vital importance to the advanced neurologist (the diagnosis of many cerebral and intercranial lesions resting entirely or in part upon optic phenomena which are to be interpreted from an anatomical standpoint alone).

4. *The retina, and its various structural elements.* This membrane constitutes the peripheral portion of the nervous optic apparatus. It is the only place in the body where the nervous system is so exposed as to admit of a direct examination, since we can see it by aid of the ophthalmoscope, and thus study its diseased conditions as well as its appearance in health. Physiologically, it is to be considered as the sensitive plate from which the details of outline and color of external objects, are telegraphed to the convolutions of the cerebrum. Many of the wonders of its construction were given you during the previous winter's course. Time will not now permit me to repeat them.[1]

The experiments of Flourens, already quoted, first demonstrated that a *crude sense of vision* remains in animals which have been deprived of their cerebral convolutions above the level of the corpora quadrigemina, and many subsequent observers have attested to the accuracy of his conclusions. These experiments point to some functions within the masses of gray matter that are associated with the optic fibres, which bear a close analogy to those of the cortical cells of the so-called "visual area" of the hemispheres. We are forced to accept the view that these ganglionic masses take cognizance of visual impulses in an imperfect way, although the cerebral convolutions seem to be essential to a complete transformation of visual impulses into sight-perceptions. Section of the optic fibres after they leave the brain invariably destroys sight, thus proving that the retina itself has no inherent power of interpreting visual impressions which are cast upon it.

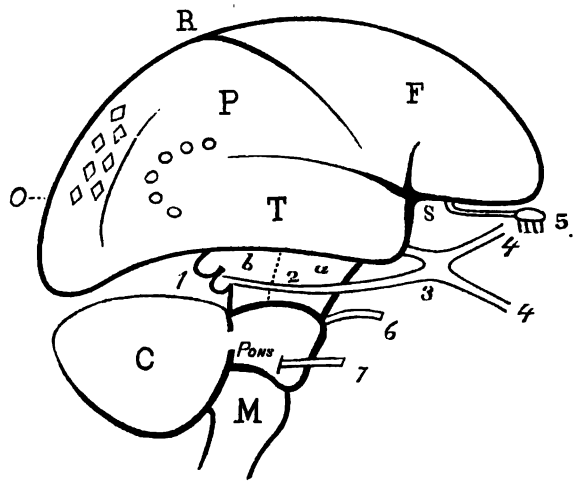

FIG. 2.—A diagram designed to show some of the relations of the optic nerve-fibres to surrounding parts. F, frontal lobes of cerebrum; P, parietal lobe; T, temporo-sphenoidal lobe; S, fissure of Sylvius; R, fissure of Rolando; O, occipital lobe; C, cerebellum; M, medulla oblongata; 1, corpora quadrigemina; 2, optic tracts; 3, optic chiasm; 4, optic nerves; 5, olfactory nerve; 6, motor-oculi nerve; 7, trigeminus nerve; *a*, basis cruris; *b*, tegmentum cruris. The circles in the parietal lobe represent the *cortical visual centres of Ferrier*; the diamonds in the occipital lobe, the *cortical visual centres of Munk*. The cerebellum and pons Varolii are shown as if separated from the cerebrum, in order to make the relations of the crus to the optic tracts apparent.

Now, from what has been stated, we can classify lesions which may affect or destroy the visual function as follows:

1. *Lesions of the retina*, or of some of the other structures of the eye which prevent the formation of images within it.

2. *Lesions of the optic nerve*, anteriorly to the chiasm, at which point the decussating fibres have crossed each other.

3. *Lesions of the optic tracts and the chiasm*, or of parts so adjacent to them as to create pressure upon the optic fibres.

4. *Lesions of those ganglionic masses* whose connection with the optic fibres has been demonstrated by anatomical or pathological research.

5. *Lesions of certain regions of the cortex cerebri*, which have been shown to be in intimate association with vision.

6. *Lesions of the internal capsule* of the cerebrum; or of such parts of the medullary centre of each hemisphere as contain fibres connected with the "visual area" of the cortex.

The *first set* of causes of impairment of vision belongs properly to the province of the oculist rather than of the neurologist, although there is one condition which should always be sought for when cerebral disease is suspected, viz., *neuro-retinitis*, or the so-called "*choked disc.*" The evidences of this condition are afforded by the ophthalmoscope alone, because vision is not impaired in the early stages. Its existence is recognized early by tortuosity of the veins of the fundus of the eye, swelling of the optic nerve, and obscureness of the margin of the disc; later, the outline of the disc becomes unnaturally sharp and distinct, the nerve atrophies, the vessels become very small, the fundus is unnaturally pale, and vision is impaired. This condition is always (?) bilateral, although it is not uncommon to note a marked difference in the severity of the changes in the two eyes. Special attention is called to this disease of the eye, because it is now considered as one of the most reliable signs of conditions of the cerebrum which tend to produce a *gradually increasing pressure*, particularly of tumors; and in the second place, because its existence is liable to be overlooked, since vision is not impaired early. The various phenomena which are due to paresis of ocular muscles,[1] and which have often the most positive value in definitely localizing cerebral disease, cannot be considered under this set of symptoms or in this connection, because they do not govern in any way the sense of sight, although they assist the eye to focus images of objects upon the retina. My friend, Dr. W. C. Ayers, has lately made a valuable contribution to medical literature in the form of a brochure upon the value of the ophthalmoscope as an aid in general diagnosis,[2] which may well be consulted by all who desire the latest information in regard to the utility of this instrument, and the intimate relationship which exists between the eye and the body, as revealed by clinical study.

The *second set* of causes of impairment of vision (lesions of the optic nerve anteriorly to the chiasm) includes chiefly those *conditions within the orbit* which create pressure upon, or destruction of, the optic nerve after it leaves the cavity of the cranium. It is evident from the diagram (Fig. 1) that the impairment of sight in this case will be confined exclusively to one eye. The phenomena produced by disease within the cavity of the orbit upon sight must, of course, depend upon the amount of injury done to the optic nerve. *Blindness of one eye* indicates, as a rule, some exciting cause outside of the cavity of the cranium; if it occurs in connection with hemiplegia, or hemianæsthesia, however, a lesion of the internal capsule may be suspected, as shown in Fig. 1. Remember that either amblyopia or total blindness of one eye never occurs in connection with pressure upon the optic nerve-fibres either at the chiasm or behind it, and that some form of paralysis must coexist with these symptoms if the internal capsule be diseased.

We come now to the *third set* of causes, viz., lesions

[1] See pages 103 to 146 of the author's work, The Applied Anatomy of the Nervous System. New York: D. Appleton & Co. 1881.

[1] These will be found by consulting the author's work, The Applied Anatomy of the Nervous System. New York. 1881.

[2] American Journal of the Medical Sciences, October, 1882.

of the optic tracts and chiasm. This set includes not only actual lesions of the nerve, but also pressure-effects exerted upon the optic fibres by lesions of adjacent structures. Before we pass to the consideration of the diagnostic symptoms of this condition, it is important that we review some of the relations of the optic chiasm and the optic tracts.

If we trace the optic nerve-fibres from behind forward, we find that the *optic tracts* appear to arise from the optic thalami, the superior quadrigeminal bodies, and the corpora geniculata. As they leave the under surface of the thalami, they make a sudden bend forward and curve around the crura cerebri in the form of a flattened band (Fig. 1). At their anterior portions the tracts become closely attached to the crura, and, in the region of the tuber cinerium, an accession of fibres to the tracts may be demonstrated. Before the chiasm is reached the tracts become more cylindrical in form.

The *optic commissure*, or *chiasm*, is about one-half of an inch long in its transverse measurement, and lies upon the olivary process of the sphenoid bone. The internal carotid arteries lie in close relation with it at the sides, and the anterior cerebral arteries, with their communicating branch, are so disposed as to constitute what might be called a *loop* about the optic nerves. The clinical bearing of this fact will be discussed later. Henle reports a few remarkable instances where the chiasm was wanting, the optic tracts being continued without interruption to the eyeball of the corresponding side; but these abnormalities are so rare as to be of no practical importance from a clinical standpoint.

We are now able to study the diagram which I draw upon the blackboard, and to properly interpret the clinical deductions which may be drawn from it. It is intended to portray the effects of localized pressure upon the optic chiasm and optic tracts, as well as those of destructive lesions of the same and of the "internal capsule" of the brain. Figs. 1 and 2 will assist us in following the details of this diagram, as they are somewhat similar.

Now, this diagram is admirably adapted to portray the mechanism of one peculiar symptom, and the use to which it may be employed by the neurologist in definitely determining the seat of the disease-lesion which is creating it. I refer to "*hemianopsia*," or *blindness of one lateral half of the retina*. The term "hemiopia" is often employed to express the same condition, although it is to my mind a poor one, since it simply means "half-vision," and thus fails to express the idea intended.

[The description of the various types of hemianopsia which followed in the course of the lecture has been omitted, because the text which accompanies the diagram covers all essential points. The author has also discussed the clinical bearings of this subject very fully in his work, "The Applied Anatomy of the Nervous System," D. Appleton & Co., New York.]

The following steps are commonly employed to detect the existence of this symptom: Request the patient to close one eye by pressing the lid down with the finger, and to so direct the open eye as to concentrate its gaze upon some fixed object near to it. [I usually hold up the forefinger of my own hand within a foot of the patient's open eye, and tell him to look steadily at it.] Having done this, take some object which is easily seen (such as a sheet of white paper) in the unemployed hand, and move it to the right and left of the object upon which the patient is gazing, and also above and below the object, asking the patient, in each case, if the two objects are seen simultaneously and with distinctness, and notice upon which side of the fixed object the patient cannot perceive the moving object. It is self-evident that the retina is blind upon the side opposite to that upon which the moving object is lost to sight (see Fig. 3).

The most common form of hemianopsia is that in which the *nasal half* of one eye and the *temporal half* of the other is blind; this condition being the result of pressure upon, or actual destruction of, one of the *optic tracts*.

When the *chiasm* is affected, we meet the *bi-nasal* type.

There is still one more form which is occasionally encountered, viz., the *bi-temporal* type. This has been interpreted by an autopsy made upon a case entrusted to the care of Professor H. Knapp, of this city. It must be evident that the chances would be extremely small of ever encountering a bi-lateral lesion which would affect only those fibres of the optic chiasm, or optic tract, which supply the temporal half of each retina, and, at

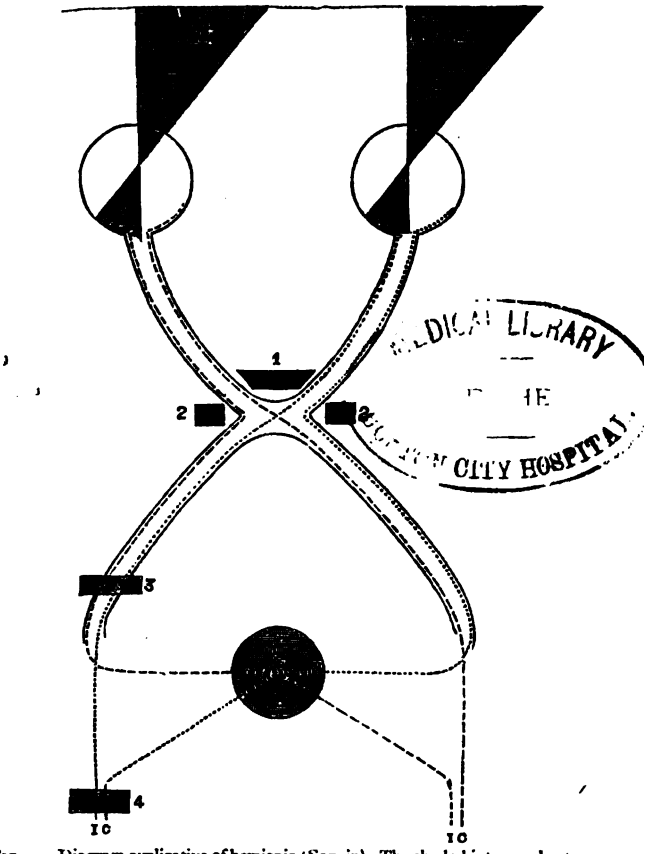

FIG. 3.—Diagram explicative of hemiopia (Seguin). The shaded intra- and extra-ocular parts, A and B, indicate the obscuration in right lateral (or homonymous) hemiopia, as caused by lesion 3, so placed as to destroy one optic tract. In that tract are two sets of nerve-fibres, one represented by a dotted line supplying the nasal half of right retina, the other fibres by a broken line supplying the outer or temporal half of the left eye. As visual lines cross in the eye the obscuration of the half-fields is the opposite. Lesion No. 1, anterior to chiasm, produces blindness of inner half of each retina, and consequently bi-temporal hemiopia. Lesions No. 2, pressing upon the sides of the chiasm, injure fibres supplying the temporal half of each retina, and cause bi-nasal hemiopia. C Q, corpus quadrigeminum, in which Professor Charcot believes a second partial decussation takes place. I C, internal capsule containing, on Charcot's hypothesis, all the fibres coming from the eye of the opposite side. 4. Lesion of internal capsule injuring all the fibres connected with the right retina, and causing amblyopia of the right eye.

the same time leave the decussating fibres intact. How, then, are we to account for the fact that this form is sometimes met with? In the preceding portion of this lecture I called your attention to a peculiar arrangement of the arteries in the region of the optic chiasm. Now, it has been shown that atheromatous degeneration of the "circle of Willis" (a peculiar arrangement of blood-vessels at the base of the brain) so impairs the elasticity of the arteries as to create a type of injury to the chiasm, so limited in its extent as to impair only the fibres distributed to the temporal halves of the retinæ, and thus to create bi-temporal hemianopsia.

We may, therefore, summarize the clinical significance of this peculiar form of blindness as follows:

(*a.*) The *homonymous* or *crossed variety* indicates lesions affecting the optic tract.

(*b.*) The *bi-nasal variety* indicates a lesion pressing upon the central portion of the chiasm.

(*c.*) The *bi-temporal variety* indicates atheromatous degeneration of the circle of Willis. Possibly (?) symmetrical lesions of the outer part of the chiasm might also cause it. I am not aware that the view of Charcot,

that a decussation of the optic fibres takes place within the substance of the corpora quadrigemina, is as yet sustained by a recorded case of bi-temporal hemianopsia produced by a circumscribed lesion within the optic lobes.

(*d.*) Finally, lesions of the *internal capsule* are often associated with *amblyopia*, or indistinct vision confined to one eye.

The bi-nasal, and also the bi-temporal varieties, are due (as a rule, at least) to lesions confined to the *anterior fossa* of the cranium; hence we sometimes find the *olfactory nerve* of the side corresponding to the seat of the lesion simultaneously affected, and creating anosmia (loss of smell) with or without subjective odors.

If the lesion be situated within the *middle fossa* of the cranium, the *optic tracts* will be affected, thus causing crossed hemianopsia; while the *motor nerves of the eye* may be simultaneously pressed upon, as they pass through that fossa on the way to their foramen of exit from the cranium (the sphenoidal fissure), thus producing more or less impairment of the movements of the eyeball of the same side. The value of these complications cannot be over-estimated, when they exist, because they are of the greatest aid in diagnosis, and often enable the skilled anatomist to positively determine the seat of the lesion.

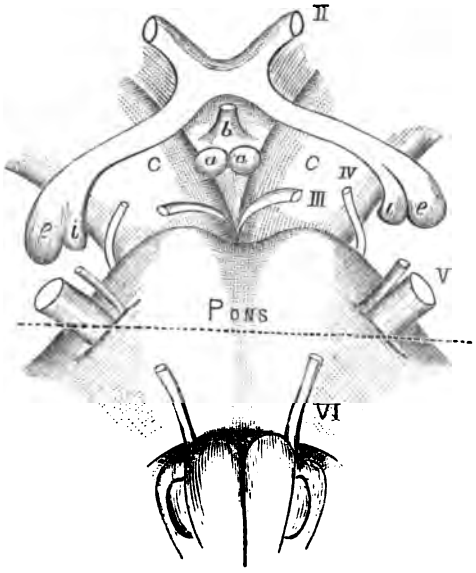

FIG. 4.—A diagram of the base of the brain, designed to show the parts adjacent to the optic nerve-tracts and chiasm. The nerves are represented by their respective numbers: II., optic; III., motor oculi; IV., trochlearis; V., trigeminus; VI., abducens; C, crus cerebri of each hemisphere; *b*, infundibulum, the pituitary body being cut off to show the optic chiasm; *a*, the corpus albicans (mamillary tubercle); *e*, external geniculate body; *i*, internal geniculate body. The dotted line which crosses the pons Varolii, connecting the roots of the fifth nerves, is Gubler's line, an important guide, since lesions of the *pons* in front of it causes "crossed facial paralysis." Lesions in the region of the *crus* may involve the third and second nerves simultaneously. Lesions about the chiasm may press upon the corpus striatum within the mass of the cerebrum. The crus comprises both the motor and sensory tracts of the cerebrum (see Fig. 5).

The *fourth set* of causes of impairment of vision (according to the classification which we have previously adopted) comprises all diseased conditions which are limited exclusively to those ganglionic masses through which the optic fibres pass in order to reach their connections with the convolutions of the cerebrum. If we confine ourselves to this strict limitation, we are forced to admit that little can positively be said respecting them which will bear upon intracranial diagnosis, because, to my knowledge, there are no recorded cases where evidences of cerebral disease have been confined exclusively to these regions. There are some symptoms, however, that may coexist with disturbances of vision when lesions exist in the region of the middle fossa of the skull; these may prove of assistance in deciding as to the seat of the lesion. Among them may be enumerated: 1. *Crossed paralysis* of the "*third nerve and body*" type, a condition characterized by hemiplegia and paralysis of the motor-oculi nerve of the opposite side. 2. *Crossed paralysis* of the "*olfactory nerve and body*" type, a condition characterized by hemiplegia and loss of smell in the opposite nostril. 3. *Hemiplegia*, or loss of the power of voluntary motion in one lateral half of the body. 4. *Hemianæsthesia*, or a loss of sensation in one lateral half of the body. 5. *Ataxic symptoms*, indicating an impairment of co-ordination of muscular movements.

The first of these points positively to a *lesion of the crus cerebri*, if unattended by other symptoms. But, if evidences of disturbance of the optic tract (crossed hemianopsia) exists simultaneously with this form of crossed paralysis, it indicates that the lesion is large enough to interfere also with the optic nerve as well as the motor-oculi fibres within the crus and the motor tract of the crus. The symptoms of this variety of crossed paralysis[1] are so well defined as to render it almost impossible to mistake them.

The second condition may occur when the lesion is sufficiently large to create pressure upon the nucleus caudatus or other motor parts of the brain, thus causing hemiplegia of the opposite side; and, at the same time, to injure the olfactory nerve, thus causing anosmia (loss of smell) in the nostril of the corresponding side. Of course the optic tract or chiasm must be involved simultaneously when hemianopsia also exists. The tests for anosmia[2] have already been given in previous lectures.

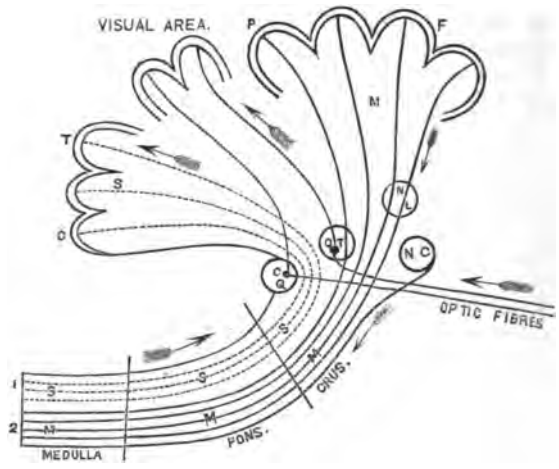

FIG. 5.—A diagram designed to show the general course of fibres in the "sensory" and "motor tracts," and their relation to certain fasciculi of the optic nerve-tracts (modified from Seguin). S, sensory tract in posterior region of mesocephalon, extending to O and T, occipital and temporal lobes of hemispheres; M, motor tract in basis cruris, extending to P and F, parietal and (part of) frontal lobes of hemispheres; C Q, corpus quadrigeminum; O T, optic thalamus; N L, nucleus lenticularis; N C, nucleus caudatus; 1, the fibres forming the "tegmentum cruris" (Meynert); 2, the fibres forming the "basis cruris" (Meynert); *a*, fibres of the optic nerve which become associated with the "optic centre" in the optic thalamus, and are subsequently prolonged to the "visual area" of the convolutions of the cerebrum; *b*, optic fibres which join the cells of the "corpora quadrigemina," and are then prolonged to the visual area of the cerebral cortex.

Hemiplegia may occur in connection with hemianopsia when the lesion is of sufficient size to affect any part of the so-called "*motor tract*" simultaneously with the optic nerve-fibres. The motor paralysis is on the side opposite to the lesion, because the fibres of the motor tract decussate at the lower part of the medulla. Flechsig has shown that, in rare cases, *exceptions* to this general rule are to be explained by an abnormality in the decussation of the motor fibres. Hemiplegia is seldom observed in connection with hemianopsia alone, since the olfactory, motor-oculi, trigeminus, and facial nerve-roots are especially liable to be simultaneously involved (see Fig. 2). This explains the mechanism of the four varieties of "crossed paralysis" which are encountered, the hemiplegia being on the side opposite to the lesion, and the symptoms produced by paralysis of the cranial nerve being confined to the side corresponding to the lesion.

[1] See author's work on The Applied Anatomy of the Nervous System.
[2] Op. cit.

Hemianæsthesia indicates some disturbance of the nerve-fibres of the so-called "*sensory tract*," the loss of sensation being confined to the lateral half of the body opposite to the lesion which causes it, because the sensory fibres decussate in the spinal cord. In cerebral hemianæsthesia there is more or less insensibility to touch, pain, and temperature, and also abolition of muscular sensibility with complete retention of electro-motor contractility. The mucous membranes of the eye, nose, and mouth are also anæsthetic. Now the upper portion of the sensory tract lies in the posterior regions of the crus cerebri and the internal capsule and crus, and is in close relation with the posterior basal ganglia. The fibres of the optic tract may be likewise affected simultaneously with lesions of the following parts: the crus, the internal capsule, the optic thalamus, the corpora quadrigemina, the geniculate bodies, and the medulla. It has been already stated that lesions of the internal capsule are often associated with *amblyopia*, but not with hemianopsia. Fig. 1 will make the probable explanation of this fact intelligible. Our ability to definitely locate lesions of the sensory tract, or of the ganglia connected with it, is, as yet, imperfect. It is only by the careful study of associated symptoms that conclusions can be arrived at.

Ataxic manifestations, occurring in connection with evidences of impairment of the sense of sight, open a wide field for speculation. The proximity and intimate structural relations of the cerebellum with the optic lobes, basal ganglia, crus, and medulla, suggest the possibility of cerebellar lesions when these two symptoms are present to a marked degree. The subject is too complex for discussion here. It will be more intelligible after the cerebellum has been considered.

The *fifth set* of causes of impairment of vision previously tabulated, will now be considered. Within the past few years the attention of physiologists has been directed, by some remarkable results of experimentation upon the convolutions of the cerebral cortex, toward the view that certain convolutions of the cerebrum were essential to perfect visual perceptions. To Flourens and some of the older observers, who had remarked that the removal of portions of the hemispheres, or serious injury to them, created blindness, the loss of sight appeared to be temporary. The fact (?) was explained in various ways, until Goltz called attention to the error of supposing that no permanent imperfections of vision remained after extensive injuries to the cerebral hemispheres. This author showed that the permanent results of such injuries might escape notice unless special care was used in the examinations of the animal. The peculiarities of the permanent impairment of vision are manifested only when the animal is subjected to tests which had been invariably potent before the cerebral injury. Thus the dog, from which portions of the cerebral hemispheres had been removed, fails to recognize his food by sight; when he is threatened by a whip he is not cowed; he is no longer affected by objects which caused him to be violently excited before the mutilation; he makes no response to the extension of the hand of his master for the paw; and yet this animal can see to avoid objects and to perform all varieties of movement, as well as in his natural condition. Another striking characteristic of this impairment of sight is, that under educational exercise recovery takes place. The dog may again be taught to fear castigation and to shrink at the sight of the whip; to recognize his food; to obey the motions of his master's hand, etc.

Two interpretations of these phenomena have been suggested. The first is, that the animal has imperfect visual perceptions, so that objects appear misty or as if seen through a gauze. Goltz suggests that they may appear as if all the colors were washed out, thus depriving food, dress, etc., of their characteristic appearances. The second interpretation supposes that the memory of past visual impressions is effaced, so that the animal forgets the pain of the lash, the taste of the food, the features of his master, the tricks which have been laboriously taught him. The first view is that of Goltz, who considers that the animal has to learn to use his imperfect visual perceptions before his intellectual faculties (which are presumed to be unimpaired) can respond to them in a proper way. The second view is that of Munk, who speaks of this form of imperfect vision as "psychical blindness," in contrast to "absolute blindness," which is the result of destruction of the optic fibres. The condition of the animal resembles that of the new-born. Retinal impressions have no associations connected with them. During the period of recovery the animal has to acquire a new memory, as it were.

With this distinction clearly in mind, we are prepared to discuss the views of Ferrier, Goltz, Munk, Luciani, Tamburini, Yeo, Dalton, and others respecting the exact seat of the visual centres within the cortex cerebri.

Goltz, in his experiments upon dogs, was unable to recognize any distinct areas which presided exclusively over visual impressions. He insists that disturbances of general sensibility accompanied the impairment of vision produced by destruction of the convolutions, and that the results depended upon the amount of brain-substance removed or destroyed. He found, however, that the locality operated upon influenced the phenomena which followed, and that recovery would take place if the injury was not too extensive. Goltz destroyed the brain by making a hole, or a number of them, through the skull, and using a *forcible stream of water* to wash away the brain-substance. The faults of the method may account for the negative results obtained by it.

Ferrier investigated the subject chiefly upon the monkey tribe (the nearest approach to the human race) and arrived at conclusions of a more positive character. This observer was led to adopt a more certain way of limiting the injury done to the cortex than that of Goltz. His conclusions may be thus summarized: When the "angular gyrus," or a convolution of the parietal lobe, so called from its shape, since it forms a sharp angle (see Fig. 2), was destroyed upon one side only, the vision of the *opposite eye* was destroyed for a time, but it eventually regained its powers. If the angular gyrus of each hemisphere was simultaneously destroyed, the *loss of sight was permanent* and both eyes were equally affected. Hence it would appear that each hemisphere is in some way connected with both eyes, because unilateral destruction of this convolution does not create permanent blindness, as it would do if the opposite hemisphere did not come to its relief. Dalton has lately confirmed the views of Ferrier by experiments made upon dogs, thus tending to confute the view of Goltz that the effects of cortical lesions depend more on their extent than on their position. The animals operated upon by this observer remained permanently blind, although the lesion was unilateral.

Munk has confined his experiments chiefly to the occipital lobes of the cerebrum, and has endeavored to demonstrate the existence of a "visual area," differing in position and of much wider extent than that of Ferrier (Fig. 2). He maintains that certain parts of this region can be shown to preside over *limited portions* of the retina, and that blindness of circumscribed spots in the retina can be artificially produced. He states that the "absolute blindness" thus created is commonly associated with "psychical blindness," from which the animal may recover by proper exercise and training, provided the whole visual area is not destroyed. This author attributes the recovery to a deposition of new visual experiences in the rest of the visual area.

Some observations which have lately been made in support of the view that the occipital lobes of the cerebrum are more directly associated with the mental faculties than the frontal lobes are of special interest to those who agree with Munk regarding the seat of the visual area of the cortex. At present, however, the subject must be regarded as unsettled.

The *fifth set* of causes of impairment of vision, previously tabulated, has been discussed in part in connection with the others. We have a mass of clinical as well as experimental evidence to show that destructive lesions situated within the *posterior one-third* of the internal capsule cause *hemianæsthesia* on the opposite side of the body. As regards vision, the symptoms which sometimes exist are especially noteworthy. There appears to be developed on the anæsthetic side a partial blindness of the eye (*amblyopia*), and the *field of vision for color* is remarkably contracted, as first pointed out by Landolt. In the normal eye the field for blue is the largest; next comes that for yellow; then orange, red, green, and violet have fields of gradually diminishing size, the last being perceived only by the most central parts of the retina. Now, in connection with hemianæsthesia caused by cerebral lesions, the perception of violet first disappears, then for green, and later for orange. In some cases yellow and blue can be perfectly recognized; but in the higher degrees of anæsthesia all colors merge into an uniform sepia tint. Another important fact has been pointed out by Landolt, viz., that the eye on the same side as the lesion participates, though to a less extent, in the loss of color-perception.

Now, if the eyes be examined with the ophthalmoscope, no evidences of organic lesion of the retina or degeneration of the optic nerve can be detected until the disuse of the organ has induced atrophic changes. It is noteworthy that hemianopsia does not occur, a fact which Fig. 3 will help to explain. From statements which have been made in preceding pages, we are forced to conclude that this peculiar type of blindness is never caused except by lesions which are situated or act below the cortex. It is more commonly met with in connection with hemiplegia than hemianopsia. The effects of lesions of the internal capsule upon other nerves of special sense will be considered later.

Clinical deductions drawn from preceding pages.—*Amblyopia* of one eye can result from lesions involving the optic nerve *in front of the chiasm*, or from *lesions of the internal capsule.* If from the latter, the field for color-perceptions will be found to be markedly contracted or color-vision will be wanting; both eyes may be affected, the most marked changes being found, however, in the eye opposite to the seat of the lesion. We have not sufficient data for positive clinical deductions respecting lesions of the visual area of the cortex in man. The blindness of the opposite eye appears to be absolute, while it lasts, in all animals upon whom the experiment has been tried.

Hemianopsia only occurs when the *optic tracts* or the *optic chiasm* are pressed upon or destroyed by lesions in the region of the base of the cerebrum. It is evident, therefore, that the trephine cannot afford relief of this symptom. When syphilitic gummata may be suspected, the prognosis is extremely favorable if active treatment be employed. The variety of hemianopsia indicates the seat of the lesion with great exactness.

If *paralysis* (in any of its forms) coexist with hemianopsia, a valuable guide will often be afforded in determining the extent of the lesion.

Crossed paralysis of the "olfactory nerve and body type" indicates a localized pressure which is chiefly exerted upon parts *within the anterior fossa of the skull.* The motor tract is probably involved by upward pressure upon the caudate or lenticular nucleus, or the fibres of the internal capsule; thus accounting for the hemiplegia of the opposite half of the body. The olfactory nerve, which lies near to the optic chiasm, is affected by pressure in the downward direction, and the optic chiasm or tract may be simultaneously involved; hence, a loss of smell in the nostril on the same side as the lesion may coexist with some form of hemianopsia, as well as with a crossed hemiplegia.

Crossed paralysis of the "motor-oculi nerve and body" type indicates a *lesion situated within the crus cerebri.* If hemianopsia be present in connection with this condition, it proves conclusively that the optic tract, which lies in close relation with the crus, is simultaneously affected by the lesion. We find, therefore, that the eye on the same side as the lesion is blind in its temporal half if the optic tract be involved; that it can no longer be turned toward the nose or made to act in parallelism with the opposite eye; that the pupil is dilated; and that the upper eyelid droops over the eyeball, giving it a sleepy appearance. On the side opposite to the lesion the eye is blind in its nasal half, and the body is hemiplegic. There are few conditions which are of greater clinical importance than this type of crossed paralysis, because the seat of the lesion is positively indicated.

Choked disc is a common symptom of lesions of the base of the cerebrum, and of any intracranial disease which produces a gradually increasing pressure. It is specially diagnostic of tumors. It is not associated with impairment of vision until late, so that it is often unsuspected when present. The ophthalmoscope is necessary for its detection. It may coexist with hemianopsia, and is always bilateral. It is a positive contra-indication to trephining

Lesions at the base of the skull may *cross the mesial line*, and still involve only one optic tract. If this occurs, the hemianopsia will be accompanied by other symptoms of diagnostic importance, no longer confined to one side. Double anosmia, general paresis or complete paralysis, general anæsthesia, and paralytic symptoms referable to both eyeballs might be thus produced. Lesions of this character are more liable to affect the chiasm of the optic nerves than the optic tracts; in either case, however, hemianopsia would result, and its type would be a reliable guide to the seat of pressure (see Fig. 4).

Crossed paralysis of the "facial nerve and body type" is not as liable to coexist with hemianopsia as the two forms previously mentioned. The reason for this is a purely anatomical one. The symptoms of facial paralysis are too involved to be given here in detail.[1]

Uncomplicated hemianopsia indicates that the effect of the lesion are confined to the optic tracts of chiasm, and that no pressure-effects are exerted upon the motor or sensory projection tracts, or adjacent nerves.

Aphasia sometimes coexists with hemianopsia. I have met with two instances of this kind. In one there was slight paresis of the left side, tending to prove that aphasia can occur with lesions involving the right hemisphere. Both were cured with specific treatment. We must attribute the development of this complication to pressure upon parts in the neighborhood of Broca's centre.

Lesions confined to the crus cerebri seldom create impairment of any of the special senses excepting that of the sight. These cases are not associated with impairment of intellect or of speech. It has been claimed that severe lesions cause paralysis of the bladder, but I have never encountered it. Many points of interest pertaining to lesions of the crura will be considered later in the course.

FEEDING SYPHILITIC INFANTS.—At l'Hôpital des Enfants Assistés in Paris, where many of the waifs and foundlings of the city are cared for, a unique feature has been introduced by M. Parrot, consisting of a nursing service for syphilitic infants. The nurslings draw their nourishment directly from the teats of the ass, to which they are presented five times during the day, and three times at night. They thrive under this treatment, and seventy per cent. live, while almost all formerly died when fed from the bottle (*Boston Medical Journal*). After all, why should they not thrive? Would they not have been nursing asses' milk if they had been imbibing from the maternal mamma?

[1] They are fully discussed in the author's work on The Applied Anatomy of the Nervous System.

THE CHANGE OF MEDICAL OPINION IN REGARD TO THE CAUSE AND RECENT EXTENSION OF MALARIA.

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The most remarkable change in professional opinion, based upon long-accepted doctrine with regard to the cause of any particular disease, is to be found in the modification of their views by medical men, within recent years, upon the production of malarial disorders. Tradition, for centuries, usurped in this direction, as in many more, the domains of fact and of proof, which, in some instances, have now been fully conceded, but in others still present only a dubious claim to our recognition. Such appears to have been the history of those conditions or influences which have been supposed for centuries to be the primal and essential factors in the development of malarial diseases.

Probably the earliest monograph extant upon this subject is the famous one by Lancisi, entitled "De Noxiis Paludum Effluviis," published in Rome in the beginning of the eighteenth century. Lancisi's investigations were extensive and searching, and his conclusions seemed so irresistible that they were adopted by scientific men at once, and have since maintained, until within a very brief period, an assured place as truths in professional literature. Those who subsequently published medical works which needed to include diseases of a miasmatic character, accepted without question or farther investigation the opinions inherited, so to speak, from the learned Roman author. Thus they passed from hand to hand as the years rolled on, and finally reached our period, bearing such emblems of authority as to challenge and disarm criticism. During the lapse of time some few additions were gradually made to the supposed knowledge upon this subject, all of which, however, had their foundation in the original assumption, namely: that malaria essentially depends upon circumstances existing in the *simultaneous operation of air, moisture, and a certain high range of temperature, causing vegetable decomposition.*

Of later years, while not denying the necessity of these conditions, a new and attractive theory led many observers to endeavor to go still farther back, and discover the remote or ultimate cause of these, as well as of all zymotic affections, in minute particles called germs, having special shapes and characters peculiar to each individual disease. Hence what is dignified with the title of the "Germ Theory." Now, what are germs? The ordinary mind cannot even conceive of their form or nature. But what is called the scientist (or, in this case more properly, experimentalist) has a large number of them in his "mind's eye," but none in his laboratory, they being, as far as we yet know, so immeasurably small as to elude observation under the most powerful microscope magnifying thousands of diameters.[1] They may be regarded as the minute and evanescent ghosts of defunct vegetable and animal molecules, and yet many of them have received polysyllabic names. They are presumed to represent something akin to atoms of diseased matter.

In this connection I may be permitted to quote the following remarks of W. Mattieu Williams, F.R.A.S., F.C.S., upon the address, in 1871, of Sir William Thomson before the British Association, treating of atoms: "After hearing all these oracular utterances concerning atoms, the unsophisticated listener will be surprised to learn that no human being has ever seen an atom of any substance whatever; that there exists absolutely no direct evidence of the existence of any such atoms; that all these atoms, of which Sir William Thomson speaks so confidently and familiarly and dogmatically, are pure figments of the imagination. He will be still further surprised to learn that the bare belief in the existence of ultimate atoms as a merely hypothetical probability is rejected by many of the most eminent of scientific men, and that among those who have disputed the idea of the atomic constitution of matter is the great Faraday himself; that the question of the existence or non-existence of atoms has recently been rather keenly discussed; and that even on the question of the permissibility of admitting their *hypothetical* existence, scientific opinion is divided; and that such a confident assumption of their existence as forms the basis of this part of the President's address is limited to only a small section of mutually admiring transcendental mathematicians."

This arraignment of the atomic theory applies with equal force to the germ theory and to its supporters. Assuming vegetable decomposition to be an essential element in the production of malaria, a number of investigators have employed much time in endeavoring to discover specific germs, only a few of which, it has been assumed, introduced into the system, usually by inspiration, would almost certainly multiply a million-fold, and manifest their presence by well-known and characteristic symptoms.

Some twenty years since, Dr. Saulsbury, an American physician of the West, created quite a sensation in the profession by the announcement that he had discovered the veritable germ of malaria. He christened it "*palmella.*" At first glance he seemed to have actually demonstrated a fact. But it is unnecessary to enumerate his experiments, as they have since been proven to be valueless and absurd. About the same time similar observations in certain malarious districts of Europe, especially in the historical miasmatic regions of Italy, were announced, but with equally negative results. Dr. Balestra was quite confident that some spores and sporangia of a little algoid plant, which he found in the air overlying the Pontine Marshes were the long-sought for things.

Two French observers, Lemaire and Gratiolet, made a similar discovery after examinations of one of the most unhealthy marshes of Sologne, in the shape of "spherical, ovoid, and fusiform spores, and a large number of pale cells," which were afterward shown to be products of vegetable putrefaction, existing in most swamps, whether innocuous or not. Quite recently two other observers—Krebs of Prague, and Tommasi Crudeli of Rome—were certain that they had finally traced the infinitessimal being into its lair. They conferred upon it the name of bacillus malariæ. They injected it into rabbits, dogs, etc., and maintained that the result in these animals was undoubted malarial fever. Their investigations were undertaken in the Agro Romano during 1879. They examined minutely the lower strata of the atmosphere in the district mentioned, together with its soil and stagnant waters. In the air and soil they found a microscopic fungus, consisting of numerous movable shining spores, of a longish, oval shape, and nine micromillimetres in diameter. This fungus they generated in various kinds of soil. The fluid matter thus obtained was filtered and repeatedly washed; and the residuum left after filtration was introduced under the skin of healthy dogs and rabbits. The microscopical particles remaining after washing considerable quantities of the surface soil were employed in similar manner. It was affirmed that all the animals experimented upon developed typical malarial fever, showing regular intervals and lasting various lengths of time up to sixty hours. There was likewise observed an increase of animal temperature, during the shivering fits, up to 42° C., the normal temperature being from 38° to 39° C. The animals so af-

[1] Pettenkofer is quite positive as to the manner in which disease-germs operate. According to him, a germ, in order to produce disease, must not only find a susceptible subject, but must also meet with that subject in a favorable locality and at a proper time; and as disease-germs are not generally very long-lived, the vast majority of them are extinguished without encountering such essential conditions. Otherwise the human race would speedily disappear. The Chief of the Micrographical Department of the Paris Observatory has recently announced a more wonderful discovery than any found hitherto with regard to germs. It seems that he has succeeded in enumerating them as follows: Their number in each cubic metre of the atmosphere of Paris amounts in winter to 7,000; in May, to 12,000: in June, to 35,000; in August, to 23,000; in October, to 14,000; and in November, to 8,000!—*St. James' Gazette.* The indefatigable Professor Hallier, of Jena, Germany, has observed in hydrophobic saliva a characteristic germ, upon which he has conferred the name of *Lyssophyton.*

fected were described as exhibiting acute hypertrophy of the spleen, similar to that noticed in human patients suffering from the same trouble—and in the spleens of the diseased animals a large number of the characteristic fungi were present. More lately Drs. Marchiafava and Valenti of Rome have affirmed that they detected the bacillus malariæ in human subjects, in a more advanced stage than in the animals experimented upon by Krebs and Tommasi Crudeli.

According to a still more recent assertion of Tommasi Crudeli,[1] results of farther pathological investigations show that the bacilli may always be detected in the blood during the febrile invasion; but that during the crisis they disappear, leaving only spores. According to the researches of Laveran, extended and corrected by Richard, the blood in malarial fever contains, during the accession, spherical organisms developed in connection with the red globules, and furnished with filaments; also certain curved and pointed bodies, *which are only infected and deformed blood-corpuscles.* The pigment granules of malarial blood are produced in the red corpuscles during the growth of the organisms. I have cited these somewhat hyper-scientific and conflicting accounts of assumed discoveries, not to discuss them particularly, but to remark that their fallacies have been detected, and that such examinations, though interesting, bring us no nearer to a solution of the question, *What is the nature of the malarial cause?* All of the different substances and forms, however minute and unknown before, discovered thus far in malarious localities, may be and have been found as well in districts perfectly salubrious.

In the August (1876) number of the *Popular Science Monthly* I published a brief account of the views then entertained almost universally as to the conditions from which malaria was regarded as springing, views in which, at that time, I concurred. Since then, however, I have been forced to materially modify my opinions on this subject. During a conversation some few years since with the late Dr. Hayes, the Arctic explorer, I was surprised to learn that malarial disease was not unknown in certain Arctic regions where the summer temperature almost never rose above 60° F., with an average for the warmest month of only about 45°. Dr. Hayes himself had treated several cases of intermittent fever among the natives there. This disposed at once of the tradition that an average summer temperature of at least 59° F. is one of the essential factors in the causation of such disorders.

Investigating the subject more thoroughly, I found many instances of the occurrence of malarial diseases in other places where vegetable decomposition was, to any great extent, impossible; and very many more instances exist, as everybody knows, of spots where all the so-called conditions for the production of the malarial poison have always been present without such poison ever having manifested itself; and others still, in which, under similar circumstances, it has appeared only at rare intervals. The doubts thus excited were subsequently corroborated during a professional connection with several cases of mill-dams alleged to have produced malaria, one of which I will allude to hereafter. Within a few years the assumption of the truth of the convictions upon this subject entertained by most physicians and hygienists has been the basis for a war upon mill-dams in the Middle and Eastern States. Assuming that the exposure periodically, by drawing off water, of lands contiguous to a stream, and, in fact, forming a portion of the river-bed when the mill-dam was full—such drawing off of a certain quantity of water laying bare a considerable area of submerged ground covered with vegetable growth—and that the action of the summer sun upon such vegetation must inevitably create malaria—there could be little question as to the deleterious influence of any mill-dam within certain latitudes upon the health of the neighboring community. But, unfortunately for this theory, there are thousands of mill-ponds, within the specified regions of average summer temperature, presenting every prescribed condition for the creation of malaria, in whose vicinity chills and fever have always been unknown as much as yellow fever or the plague.

In this connection it is proper to recall the fact that since the United States Census of 1870 there has been particularly noticed an evident extension of the subtle miasmatic influence over regions previously exempt from it within the Middle and New England States. The additional effect of this disease-wave upon the naturally malarious site of New York City alone in this period was exhibited in the fact that from 1868 to 1872 the number of annual victims to these fevers increased three hundred and fifty per cent. It is well known that in places previously exempt from them miasmatic fevers occasionally appear and disappear without there having taken place any perceptible changes in the relations of the soil. Sometimes such fevers assume a widely epidemic or pandemic character, appearing to have broken loose from their native haunts in order to invade a great extent of territory. Thus, as Hertz and Proust inform us, the continent of Europe was almost entirely overspread by such pandemics in 1558, 1678, and 1679; from 1718 to 1722; from 1808 to 1811; from 1824 to 1827, and from 1845 to 1848. That the cause of malaria being thus disseminated is equally mysterious with that of most epidemics few will venture to deny.

When inquiring why malarial fevers should prevail for any considerable time in a given region, we must divest our minds of preconceived notions, and examine the matter judicially. We shall thus find that a variety of different circumstances seem to be connected with the prevalence of such diseases in different localities; and these last may be classified as follows:

1. *Essentially Malarious Districts.*—Here, as far as known, malaria *has always existed*, and analogously always will. Manhattan Island, together with its surroundings—Westchester County, Northern Long Island, and Eastern New Jersey—present the most familiar examples. While in some portions of these territories the existence of swamps and overflowed lands does appear to bear a positive relation to malarial affections, and their drainage does seem to be followed by a *diminution*

[1] The latest publication by this gentleman, who is a Deputy to the Italian Parliament, and, so to speak, the present apostle of the theory which ascribes the production of malaria to a ferment consisting of germs, termed by him *schizomycètes bacillaires*, is a report, dated March 18, 1883, to the Italian Minister of Agriculture, Industry, and Commerce, upon proposed legislation, having in view the general suppression of malaria throughout Italy, but more especially in the Roman Campagna. He appears to regard so herculean an undertaking as feasible under administrative pressure. His plan would involve an extensive concerted system of thorough cultivation (*cultures intensives*) and drainage, for the destruction and prevention of said ferment, which, as he avers, can be set free only under three indispensable conditions, viz.: "1, a temperature of about 20° C. (68° F.); 2, a moderate amount of soil humidity; 3, the direct action of the oxygen of the air upon those portions of the soil containing the malarial ferment; and should but one of these conditions be wanting, the development of malaria is suspended." Besides these extensive agricultural measures of relief, he insists also upon the universal administration of arsenic in prescribed doses and solid form to the farm-hands throughout the malarial regions of the country. He does not even suggest any means of enforcing a scheme calling for arbitrary radical changes in the various agricultural systems pursued by an immense number of farmers, fruit-growers, herders, etc. He questions the efficacy of quinine as a prophylactic, although few of our army surgeons who employed it for that purpose during the War of the Rebellion, will, I judge, be found to agree with him. In my capacity at that time as the Medical Inspector of the Fifth (Regular) Corps of the Army of the Potomac, I had occasion to observe the prophylactic effects of quinine, not only in my own person, but in that of very many others. I need scarcely add that most of the numerous and fatiguing campaigns of that army were conducted during the hot season, in regions fully as malarious as almost any of Italy. Tommasi Crudeli likewise differs from the generality of so-called authorities in restricting the rise of the malarial ferment to merely a few feet perpendicularly ("four or five metres").

He gives examples of large numbers among the equine and bovine species having suffered severely from malaria. Strangely enough, his experiments, and those of Marchiafava and Cuboni, with the malarial ferment infecting the human system, have been conducted, so far as I am aware, almost exclusively upon dogs and rabbits, animals which are not proven to suffer from malarial invasion in the regions referred to. I have myself seen some fine English hunting-dogs imported into Rome, and constantly used for the chase in the malarious hunting grounds of the Campagna and Pontine Marshes without suffering any ill effects whatever. The hares and rabbits of Italy equally escape such attacks, if their appearance indicates anything. Moreover, those who perform experiments upon the rabbit know, that on account probably of the exceedingly timid nature of that beast, it exhibits, when handled, a marked rise in animal temperature. Another singular fact, gravely set forth by Tommasi Crudeli, is the necessity of obtaining blood only from persons suffering with *pernicious fever*, in order to produce intermittent symptoms in the lower animals. Thus he confesses that, although he had made extensive preparations for such experiments during the year 1882, he refrained from trying them, because not a single case of *pernicious fever* was received during that period into the Roman hospitals. He hopes to be more fortunate, however, within the present year.

of such diseases (*never, however, by their entire suppression*), in other instances the drainage of such places has been succeeded by a positive increase, rather than a subsidence of miasmatic troubles. We are, therefore, placed in a dilemma as regards the influence of drainage in exterminating malaria. On the other hand, whether in miasmatic regions or elsewhere, I do not presume to deny that *thorough* drainage has a beneficial effect upon the *general* public health, when we consider the large category of diseases. But this result proves nothing as to the *cause* of malaria.

2. *Non-malarious Districts.*—Here malaria has appeared only occasionally, and at irregular intervals and with a limited period of existence; for, according to its previous history in such territories, its disappearance sooner or later was inevitable. Dr. Oliver Wendell Holmes' admirable description of similar events in various portions of New England during colonial days substantiates this fact. New York State, New Jersey, and Pennsylvania are largely exempt from *endemic* malaria, but have been afflicted from time to time in certain parts with invasions of *pandemic* malaria. We are entirely ignorant of any laws governing these erratic outbreaks.

3. *Elevated lands, even lofty mountains and extensive dry sandy plains, where none of the so-called conditions for malaria can be discovered in simultaneous operation, but where malaria is virtually constant.*—Such instances are very numerous, and stagger even the most ingenious of the swamp and germ theorists. To these gentlemen it may seem almost sacrilege that any intelligent reader and observer should become an iconoclast as to the idols which ages of study have built up for all future worship—nevertheless, so it is; and it is significant that some of the most distinguished scientific men have lately abjured the orthodox opinions in regard to the essential conditions for the production of malaria. In a *cause célèbre* tried at Pittsfield, Mass., in October, 1882, on account of an indictment brought against the owners of a mill-dam for creating malarial fevers, Dr. Paul A. Chadbourne, President of the Massachusetts Agricultural College, and ex-President of Williams College, testified that, as a professor in the Berkshire and Maine medical schools he had formerly lectured upon the nature of malaria. He then believed it to be of gaseous character, due to heat and decomposition of vegetable material, but he had since entirely abandoned that theory, and adhered to no opinion whatever, based upon sufficient facts to make it valuable, as to how malaria arises.

In the same case, Dr. Charles W. Chamberlain, Secretary of the Connecticut State Board of Health, and a gentleman who, from very extensive observations throughout his own State, is familiar with this subject, as far as present knowledge will allow, after admitting that he had formerly held the marsh and germ theories, acknowledged that he had recently given up both.

A similar complete change in opinion was avowed by Dr. Francis Bacon, ex-Professor of Surgery at Yale College; by Dr. N. G. Kierle, of Baltimore, Lecturer on Pathology in the College of Physicians and Surgeons of that city; by several of the principal practitioners of Berkshire County, Mass., and by a dozen well-known physicians from other portions of the country.

The vast importance of a positive or negative expression of opinion by distinguished experts upon the subject in question may be better understood when it is stated that the interests of several thousand manufactories run by water-power, in Massachusetts alone, were involved in the decision of this case, an unanimous one by the jury in favor of the mill-dam.

Although medical men with the reputation of those above mentioned find it proper to abjure long-cherished convictions, which from careful observation and logical inference have become untenable, and are forced to acknowledge themselves as ignorant of the ultimate causes of many affections as were Celsus and his cotemporaries eighteen centuries ago, nevertheless, the rapid strides accomplished in other branches of medical inquiry encourage us to anticipate trustfully the time when we shall be gratified with a comprehension of the invisible, mysterious, and ever-active agencies which engender the various zymotic diseases.

BENZOATE OF SODIUM IN THE TREATMENT OF ACUTE GASTRO-INTESTINAL DISEASES.

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During the past year I have been very favorably impressed with the rapid, as well as satisfactory action of the benzoate of sodium in the treatment of acute dysentery, cholera morbus, intestinal colic, crapulous and flatulent and other allied morbid conditions of the alimentary canal.

Whether this result is due to its alkaline reaction, or to its disinfecting action on the morbific gases from the decomposing ingesta, or to its stimulating action on the liver, I will not now undertake to demonstrate. That it does give quick and permanent relief in such conditions I have carefully noted in more than twenty instances. The following typical cases are selected from my case-book:

Case I.—*Acute Dysentery.*—Mrs. G——, aged thirty-one, usually enjoying good health, had colic, looseness of the bowels, vomiting, great thirst, and no desire for food for three or four days, and not being relieved by diarrhœa mixtures, cholera-drops, etc., sent for me. I saw her at nine o'clock in the evening, when she was suffering with severe headache; little abdominal tenderness on palpation; mouth and fauces dry; very thirsty, but retaining liquids swallowed only a few minutes, and during the last twenty-four hours complaining mostly of an unavoidable desire to go to stool, at which, however, there was only mucus and blood accompanied by violent tenesmus. Prescribed the following mixture, the dose to be repeated every half hour until relieved:

℞. Sodii benzoatis..... ʒ j.
Elixirii simplicis..... ℥ ij.
M. S.—Two teaspoonfuls at a dose.

On the following morning she told me that soon after taking the first dose she was greatly relieved, and that she had taken only four doses when the pain and bearing down while at stool were entirely gone.

The stomach did not reject the medicine at any time, and she had not taken it since midnight, after which she rested quite well for several hours. Bowels still loose, but discharges are feculent. No tenesmus. Not much thirst. Left the following prescription:

℞. Pulv. opii..... ij. gr.
Pulv. camphor..... ʒ j.
M. et in cap. iv. div.
S.—Take one capsule after each passage. To have only boiled milk and toast, and, if very thirsty, iced carbonic-acid water as the only drink.

On the following morning, I found her sitting up in bed. Said she was all right, except a little weak. No movement from bowels since six o'clock last evening. Ordered her to have half a tablespoonful of Boudault's wine of pepsin, with ten drops of the dilute nitro-muriatic acid, three times a day for one week, at the end of which she came to my office to say that she had had no further trouble.

The use of the benzoate of sodium in the above case, and in three others of a similar nature, was as surprising to me as it was gratifying to the patients. In a very few hours an attack of acute dysentery was changed to a simple diarrhœa, which yielded kindly to a few small doses of opium and camphor.

Case II.—*Cholera Morbus.*—Mr. A——, a strong,

healthy young man, was taken at midnight, following a very indigestible dinner, with nausea and colic, soon followed by profuse vomiting and purging, which continued until five o'clock in the morning, when I found him with his knees flexed on his abdomen, which was very sensitive to pressure, face pale, pulse small, and a frequent desire to defecate. I immediately gave him fifteen grains of the benzoate of sodium in a tablespoonful of simple elixir. This was retained about fifteen minutes, when he vomited quickly, and without that very disagreeable gagging sensation in his throat which attended previous similar acts. In a few minutes he took half the quantity, when I left instructions to repeat the same every hour if required.

When I visited him again, at five o'clock in the evening, he was sitting up in bed eating poached eggs on toast. Said he was feeling all right, that he had not taken any of the medicine since eight o'clock, and was going to business in the morning. A few days later I saw him, and he told me that he had had no further trouble.

In several cases of this description the benzoate of sodium acted equally well—no other medicine being required.

CASE III.—*Intestinal Colic.*—In this case, representing a class in which I had usually given inhalations of chloroform or hypodermics of morphine, I was somewhat doubtful about the propriety of using the benzoate of sodium; yet, recognizing colic as due to spasms of the muscular tissue of the intestine caused by flatulency, and having seen such remarkable results from its use in analogous cases, and especially after the statement of the patient that "morphine affects my head so," I determined to use it.

Mrs. W——, aged thirty-five, anæmic, poorly nourished, occasionally has attacks of colic after any indiscretion in her diet.

When I saw her, at four o'clock in the afternoon, she was lying on her side with knees drawn up toward thorax, and frequently crying out with pain, "All over my stomach."

I learned that two or three days ago she was taken with vomiting and diarrhœa, which had been mostly relieved—the former since noon, and the latter since morning—by domestic remedies, and that she had passed no urine for twenty-four hours, during which time the paroxysms of pain had been gradually increasing in frequency and severity. She would not permit me to use the catheter, or even to carefully examine the abdomen, on account of the pain caused by any change in her position. I gave her fifteen grains of the benzoate of sodium in a tablespoonful of simple elixir, and instructions to repeat half the dose every hour if necessary. Visited her again at nine o'clock in the evening, when she told me that in a few minutes after taking the medicine she was greatly relieved; that she passed plenty of water in about one hour afterward, and did not take any more of the medicine until eight o'clock, when, having a little pain over the umbilical region, she repeated half of the first dose and had had none since. On the following morning I found that she had rested well during the night, without any recurrence of the colic. Ordered her to take, for a few days, half a tablespoonful of Boudault's wine of pepsin, with ten drops of dilute nitro-muriatic acid three times a day, and heard nothing more from her.

In the bowel complaints of children, where the passages are greenish, lumpy, mucoid, and frequently streaked with blood, I have repeatedly seen them changed to their natural color within a few hours after commmencing the use of benzoate of sodium, in hourly grain doses for each year of age, and that, too, without even dieting the child.

HOW TO CURE SORE THROAT.—Mrs. Disraeli told the Queen, "When Disraeli has a sore throat I cure him by putting my arm round his neck and keeping it there all night."

EMPYEMA — DOUBLE INCISION WITH THROUGH DRAINAGE—RECOVERY.

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THE methods of treatment of empyema recommended by various authorities differ widely, and the statements made by each are so positive that the practitioner is often in doubt as to which method to follow. A decision can be most readily reached by comparing the results of the various operations as they are reported from time to time. It is now acknowledged that in most cases aspiration alone will fail to relieve the condition permanently, and that a free exit must be afforded to the pus collected in the pleural cavity. It is the object of this article to recommend a double incision with through drainage, and to demonstrate its advantages over the method of a single incision. The case reported illustrates most of the points of interest to be noted:

Hannah S——, aged six, was admitted to Bellevue Hospital December 5, 1881, and assigned to the fourth medical division, Dr. H. F. Walker, attending physician. She had recovered from scarlet fever in October, but during November had suffered with headache, gastric disturbance, and general anasarca, due to a nephritis which had developed during the fever. These symptoms subsided during the latter part of November, at which time the urine increased in amount. But with the subsidence of the symptoms of nephritis a new set of symptoms developed. The child began to complain of pain in the left side, coughed a good deal without expectorating, and had a well-marked fever which was always worse at night. Her mother noticed that she could not lie on the right side, and that the left side became tender and swollen. On admission the child was thin, poorly nourished, fretful, and had a temperature of 102°; pulse, 140; respiration, 40. The heart was displaced, its apex being in the fourth intercostal space, one-fourth inch to right of the sternum; the left side of the chest bulged outward, measuring one-half inch more than the right side in circumference at the level of the nipple, and all the physical signs of pleuritic effusion were present. Puncture with the hypodermic needle drew greenish pus. The upper level of the effusion corresponded with the space of the scapula.

On the 6th aspiration was performed, eleven ounces of pus being removed, with the result of relieving the dyspnœa, and bringing the heart apex about one inch to the left of its former position. By this procedure the level of the fluid was lowered to the seventh rib posteriorly. The child was put upon cod-liver oil and iron, and an examination of the urine having shown the presence of albumen in small amount, with a few blood-globules and hyaline and granular casts, the white drink (pot. cit. et acet. inf. digital. aq.) was ordered with a view to increasing its amount.

By the 15th the fluid had returned to the level of the spine of the scapula, though the general condition of the child had improved in spite of the hectic fever. The temperature reached 101° or 102° every night, and was not affected materially by the administration of quinine given per rectum, as it could not be retained in the stomach. During this time the daily amount of urine had increased from fifteen to thirty ounces, but it always contained albumen. Aspiration was again performed, the level of the fluid being reduced to the ninth rib by the removal of eight ounces of pus. Same treatment was continued, inf. scoparii being substituted for inf. digital. in the white drink.

On the 29th the pus had again risen to the middle of the scapula, and it was evident that the child was succumbing to the hectic fever. Her general condition was poor, she was very weak, pale, thin, and fretful; her appetite was capricious, milk being the only article of diet which was always digested; her bowels moved irregu-

larly; she passed about twenty-eight ounces of urine daily, and there was no ascites or anasarca. Aspiration having failed to afford permanent relief, Dr. Walker considered an operation necessary, and kindly intrusted it to me.

On the 30th the operation was performed under ether. All antiseptic precautions were observed, and the method of Lister was carried out in every detail. An incision was made in the seventh intercostal space, one-half inch external to the inferior angle of the scapula, with a scalpel, and a director having been introduced, the opening was enlarged with a probe-pointed bistoury until it was three-fourths of an inch in length. Through this opening forty ounces of pus was evacuated. A long probe was then introduced into the opening, and passed downward and forward to the lowest limit of the pleural cavity. Its point being felt in the ninth intercostal space, about one inch external to the mammary line, was cut down upon and brought out. A medium-sized, fenestrated, rubber drainage-tube was then attached to the probe and drawn through from the first to the second incision. Each end of the tube was secured by a safety-pin, and projected an inch from each incision. The length of the tube was about five inches. At the time of the first incision an intercostal artery was cut and considerable blood was lost. The hemorrhage was at first arrested by a serrefine, and later, as all attempts to seize the artery failed, by the introduction between the ribs of a piece of compressed carbolized sponge. Full Lister dressings were then applied.

During the operation air entered the pleural cavity at each inspiration, but as a good spray of carbolic was continuously directed upon the whole chest the possibility of sepsis was prevented. As the operation was being concluded the child's pulse, which had been growing feeble, ceased, and respiration stopped. Artificial respiration was kept up; nitrate of amyl being held to the nostrils, hypodermics of whiskey or digitalis were administered, and a hot rectal injection of whiskey and water was given. She revived slowly under the action of these stimulants, and two hours after the operation was quite comfortable, though very weak. Pulse, 120; respiration, 40; temperature, 98½°. Seven hours after the operation it was necessary to renew the dressings, as they were soaked with pus. This was done under the spray. During the following twenty-four hours the child's condition was critical. She slept only a few minutes at a time, vomited frequently when awake, and seemed to be growing weaker. She was nourished by milk and brandy in small amount, frequently given, both by the stomach and by the rectum. The dressings were changed once, and were found to contain considerable pus. Temperature, A.M., 98°; P.M., 99°; respiration, 30; pulse, 120.

On January 1st she seemed much more comfortable; did not vomit, retained milk, beef-tea, chicken soup, and brandy, and had a natural movement of the bowels. The amount of pus on the dressings was much less than before. The tube was washed through with a solution of permanganate of potash in both directions, a small amount of pus being washed out. P.M. temperature, 99°. The heart apex is now in its normal position. The child has no pain in the chest, coughs much less, and respiration is regular—30 per minute. The lung has expanded, and vesicular breathing and normal voice are heard down to the level of the seventh rib behind.

Up to January 20th the child's condition improved steadily. Her digestion was good, and she gained much flesh and strength. Her bowels moved regularly, and she passed about thirty ounces of urine daily. The chest was dressed daily with one exception, and the discharge of pus decreased steadily until only about an ounce was found on the dressing, and about a drachm was washed out. A solution of salicylic acid, one per cent., was used in washing out the tube, and the dressing was always done under the spray. The lung expanded well, and at no time was there any sacculation of pus, the drainage being perfect. When the child sat up the discharge ran out of the anterior and inferior end of the tube, and when she lay down, the superior and posterior end being then lower, it ran in that direction. Only twice during this time did the temperature rise above 100°: once when the dressing was not renewed, and once when a small abscess formed on her left thigh.

Between January 22d and February 3d the child went through measles, having contracted it in the ward from another child. She suffered a good deal from the attendant bronchitis and laryngitis, and at one time had a temperature of 105°. During this period the discharge was very scanty, but the side was dressed daily as usual. After her recovery from measles, and until February 18th, her general condition was improving, but the discharge showed a tendency to increase, about an ounce being found on the dressing every day, and the P.M. temperature rising to 99½° or 100° every night. It was thought that the heavy Lister dressing was acting as a fomentation. In place of it a light pad of oakum, bound on by a few turns of gauze was applied, and a solution of carbolic acid (one part to ninety) was substituted for the solution of salicylic acid to wash out the chest. The result was good. The temperature at once decreased at night to 98½° or 99°; the discharge became less, and on March 1st it was resolved to remove the drainage-tube. At this time the only remains of the formerly distended pleural cavity, to be found by physical examination, was a small narrow area between the two openings. The lung had expanded, and the side had slightly retracted so as to measure half an inch less than the right side in circumference, the chief deformity noticeable being the sinking of the left shoulder when she stood up. The tube was pulled through the posterior opening into the chest, being first attached to silk ligatures at its posterior extremity, so that it might be replaced if necessary. It was then pulled out of the inferior opening half an inch daily until the 6th, when it was finally removed, the discharge having entirely ceased.

On the 4th both openings had closed completely. On the 20th physical examination showed heart in normal position; slight dulness, with distant vesicular breathing, and slight diminution in voice sounds below the ninth rib behind, and below the seventh rib in the axilla on the left side. Under regular gymnastic exercise the deformity has entirely disappeared, and both shoulders are at the same level. On forcible inspiration the left side expands one-fourth inch less than the right side. The child is in good general condition, is up and plays about all day, has a good appetite, normal stools, and passes thirty ounces of urine daily, which still contains a small amount of albumen and a few hyaline and granular casts. She was discharged from the hospital, but kept under observation for three months, during which time she remained in perfect health.

In connection with this case there are several points to be noticed. It would have been well to operate at the time of the second aspiration, the result of the first aspiration showing that this means was inadequate to cure the empyema. Operation in these cases should be performed early, as the hectic fever, if allowed to go on, weakens the patient constantly.

The existence of nephritis did not seem to affect the result, and hence should not interfere with the operation. The danger of collapse is less if the pus is evacuated slowly. In this case the necessity of stopping hemorrhage prevented me from closing the posterior opening while the anterior one was being made, and allowed a too rapid escape of pus. It would be advisable to apply the dressings as soon as the operation is completed, and let the pus soak into them gradually. The drainage by means of two openings was far better than could have been secured by one alone. In this case it mattered little whether the patient was in an erect or recumbent posture, pus never collected in the cavity. This seems to be the great advantage of this method over all others.

When one has washed out a chest through one opening, and seen how a change of position of the patient will prevent or facilitate a free discharge, as the case may be, he cannot fail to appreciate the advantage of two openings, with the possibility of washing out the cavity in either of two directions. Perfect drainage is the object. It can only be secured by two openings, one of which shall be at the lowest point of the pleural cavity when the patient is standing, and the other at the lowest point when he lies down. Otherwise, during at least ten of the twenty-four hours, the drainage is imperfect, if the patient is not confined to one position in the bed. The Lister dressing is important as long as the surface liable to absorb septic matter is extensive, but when a small sinus alone remains its weight and thickness seem to make it unsuitable, and a lighter dressing favors healing. If the measles had not delayed the result three weeks, and if the light dressing had been applied two weeks earlier, it is reasonable to conclude that the drainage-tube could have been removed five weeks after the operation, instead of ten weeks, as was the case. The result of gymnastic exercise in correcting the deformity which followed the operation was very satisfactory.

It may be concluded from this case, that through drainage is eminently successful in the treatment of empyema in children, and that it has decided advantages over every other method.

Progress of Medical Science.

Articular Ganglion of the Knee.—Dr. Nicaise reports, in the *Revue de Chirurgie* for June, 1883, the case of a man who presented himself for the removal of a small tumor situated upon the outer side of the knee. The tumor was the size of a small nut, somewhat flat, irregularly lobulated, soft, fluctuating at certain points, and irreducible. It was of slow growth, and slightly adherent to the skin and underlying tissues. The joint was in no way involved, and the movements of the knee were perfectly free. A positive diagnosis was not made, though the author was inclined to regard the new growth as a sebaceous cyst. When removed the tumor was found to contain a gelatinous liquid resembling the vitreous humor of the eye. The walls were irregular, presenting here and there little recesses forming a sort of secondary cysts. The inner surface was lined with flat epithelium, outside of which was a cellular shell, interwoven with elastic fibres and presenting in places a fibrous formation, due probably to irritation produced by movements of the tumor.

Acute Scoliosis.—The following case of acute lateral curvature of the spine is related by Professor Desprès in *L'Union Médicale*, No. 54, 1883, as confirmatory of the theory of Duchenne of Boulogne concerning the nature of this affection. A young woman, twenty years of age, was attacked with typhoid fever of mild type, not accompanied by any grave cerebral symptoms, and from which she recovered in about three weeks. During convalescence her husband noticed that she did not stand as straight as before. The deviation increased gradually, without causing any pain, until she was finally led to consult M. Desprès. Examination showed a lateral curvature of the spine in the dorsal region with convexity to the left. The lumbar spine was normal, as the affection was of too recent date to permit of the formation of a compensatory curve in this region. The condition present was declared by the author to be atrophie des spirales lombaires on the left side. The atrophy had undoubtedly followed the typhoid fever, as it is known that muscular degeneration occurs in the course of this malady. The results of treatment were most happy, a very great amelioration being observed after only eight days. The treatment consisted in faradization of the weakened muscles over the convexity of the curvature, repeated every day, in exercises, and in slight mechanical support. The gymnastic treatment consisted simply in trapeze exercises, or raising the body from the ground by the arms. M. Desprès does not regard apparatus as of any therapeutical value in this condition, but uses it merely as a support to be worn in the intervals of active faradic and gymnastic treatment.

Inflammation of the Thyroid Gland in Diphtheria.—Dr. Brieger relates two cases of diphtheria complicated with thyroid inflammation (*Centralblatt für Klinische Medicin*, June 23, 1883). The first case was that of a girl, eighteen years of age, who, when first seen on the seventeenth day had no fever. Two days later, while the diphtheritic membrane was still present, she had tolerably high fever with pain and swelling of the thyroid gland. There was aphonia and dyspnœa. Antiphlogistic measures proved of no avail, but considerable relief was afforded by poulticing. Twenty days later an incision was made at a point of fluctuation, and about an ounce and a half of pus evacuated. Under careful treatment the patient recovered. In the second place, that of a woman aged thirty-two, the inflammation was aborted by energetic antiphlogistic treatment and leeching in the early stage. In both cases the thyroiditis subsided before the local diphtheritic process. The author believes that the glandular inflammation was directly traceable to an invasion by the diphtheritic microbes.

Acute Œdema of the Glottis.—Dr. Rabère related the following case, seen by himself and Dr. Laylavoix, to the Société de Médecine et de Chirurgie (*Journal de Médecine de Bordeaux*, June 24, 1883). A man, sixty-two years of age, of vigorous health, without history of previous laryngeal trouble or syphilis, was taken with slight chills one evening after working in his garden. The next day he was a little hoarse and felt a slight soreness in swallowing, but was otherwise well. The hoarseness and difficulty in deglutition had increased the following day, and in addition there was a little dyspnœa. That evening he was suddenly awakened in a most threatening attack of suffocation. Examination showed a swelling and induration of the aryteno-epiglottidean folds, but no other trouble in the throat could be made out. Active treatment by counter-irritants, leeches, and emetics produced but slight amelioration, and upon a second attack of urgent dyspnœa it was decided to perform tracheotomy. The operation was postponed when the urgent symptoms subsided, but a third attack of complete suffocation, during the momentary absence of the attendants, resulted fatally. No cause for the œdema could be discovered, except cold, as the man had always enjoyed excellent health. There was no reason to suspect renal trouble, but unfortunately no examination of the urine was made.

Flax as a Dressing for Wounds.—Dr. Makuschina writes in *Vratch*, No. 12, 1883, concerning flax as a cheap and convenient surgical dressing. She prepares it in the following way: Small bundles of flax are boiled for three hours in ordinary lye-water, and then left to soak in the same for eight or ten hours. After that it is washed five or six times in clean water, dried, and combed out. It loses about twenty-five per cent. in weight, and is a perfectly white, soft material, much more hygroscopic than before being so treated. It is several times cheaper than absorbent cotton, in Russia at least. Dr. Anton Schmidt, of Moscow (*Centralblatt für Chirurgie*, June 30, 1883), also recommends the use of flax. He says that it possesses an advantage over absorbent cotton in that it does not become matted when wet, thus retaining the secretion about the wound. By the addition of corrosive sublimate, iodoform, or carbolic acid an excellent antiseptic dressing may be prepared. In military surgery also it recommends itself by the compactness in which it may be carried, taking up much less room than either cotton or jute.

A Remarkable Case of Ascites.—Dr. Antonio Lanini relates in *Lo Sperimentale*, vol. li., No. 1, a case of ascites occurring in a man thirty-four years of age, in which paracentesis was performed ninety-two times from April, 1878, to December, 1882. During this period over three hundred and eighty gallons of fluid were withdrawn from the abdominal cavity without any apparent loss of strength on the part of the patient. The cause of the ascites was not clear, for careful examinations made immediately after the removal of the fluid could detect nothing abnormal in the abdomen. There were no signs of obstruction to the portal circulation, and the normally secreted urine contained no albumen. The author thinks that there was an irritable condition of the peritoneum, resulting from an inflammation of this membrane, from which the patient suffered in 1878. There had never been any fever since the subsidence of the peritonitis. Diuretics, cathartics, counter-irritation, diaphoretics, strong compression of the abdomen, all were tried without success. This patient was related to another man, also under Dr. Lanini's care, on whom in the course of twenty years phlebotomy had been performed five hundred times, and cupping thirty times, besides the application in the intervals of two thousand leeches.

Peritonitis and Peritonism.—In observing a case of acute peritonitis, rapidly fatal, in a young man who had swallowed some orange-pits, Professor Trastour recalled the distinction established by Gubler in 1877 between peritonitis and peritonism. By the latter term is meant the totality of grave reflex phenomena sometimes observed in a patient suffering from peritonitis. These symptoms are produced through the agency of the great sympathetic, and are often overwhelming in their violence. Peritonism is not dependent upon the intensity of the original inflammation. A light peritonitis may be the occasion of the violent symptoms of peritonism, while, on the other hand, an extensive purulent inflammation of the peritoneum may give rise to no general reflex phenomena. The treatment of peritonism consists in the administration of alcohol, chloral, and especially of opium in large doses. The latter may be given in fractional doses, aggregating fifteen grains in the twenty-four hours, its effects, of course, being most carefully watched.—*Revue Médicale*, June 23, 1883.

Perisplenitis and Pleurisy in Typhoid Fever.—Simple pleurisy, without pulmonary lesion, is supposed to be a rare complication of typhoid fever. Guillermet has collected a number of such cases, and seems to agree with another observer who regards simple pleurisy as rather common in typhoid fever, and who attributes it to the marked tendency to serous inflammation which exists in this disease. The observations of Dr. Merklen (*Revue Médicale*, June 23, 1883) lead him to advance a more rational pathogenesis. He states that the spleen in typhoid fever is not only the seat of a passive congestion, but is also a centre of inflammatory irritation which may involve the capsule. This may determine by continuity a localized or general peritonitis, whence the inflammation may spread to the diaphragmatic pleura. In this way he would explain the origin of simple pleurisy, and not by a preference of inflammation to seek the serous membranes.

Typhoid Fever and Pregnancy.—Dr. Martinet concludes a paper with this title as follows: 1. Typhoid fever is rare in pregnant women. 2. It determines abortion in about one-half of the cases; the more surely, the less advanced is the pregnancy. 3. The lightest forms may produce abortion. 4. This complication arises usually in the course of the third week, and sometimes at the beginning of convalescence; it causes no recrudescence nor return of fever. 5. Puerperal accidents are the exception. 6. The immediate causes of abortion are unknown; elevated temperature, active or passive, uterine congestion, and changes in the blood, although seemingly the most probable, cannot be regarded as the causes in all cases. 7. The treatment for the fever and the miscarriage is the same as for each condition alone. *L'Union Médicale*, Nos. 52 and 53, 1883.

Poisoning from Diseased Meat.—Dr. Ruysch reports the poisoning of about two hundred persons in the town of Heesch, Holland, who had eaten the flesh of a cow that had died in giving birth to a calf, also the flesh of the still-born calf and of another dead calf. All who had eaten the meat were taken ill and three died. They suffered from severe gastric symptoms, chills, fever, headache, and great depression, so that the physicians supposed at first that they had to do with an epidemic of typhoid fever. Others presented the symptoms merely of gastro-enteritis. The nature of the poison in the flesh could not be clearly determined, as none of the animals had died from an infectious disease.—*Centralbl. für Klin. Med.*, June 9, 1883.

A Hitherto Undescribed Neurosis.—Dr. Wernicke relates the case of a man, twenty-five years of age, who suffered from tonic spasms of the voluntary muscles (*Centralbl. für Klin. Med.*, June 9, 1883). The affection differed from tetanus in that each convulsion was of shorter duration, the contractions were weaker, and the spasms did not involve the entire body but only single groups of muscles at a time. The convulsions were painless and recurred at frequent intervals, but ceased during sleep. They involved the muscles of respiration, but left free the upper extremities and the territory supplied by the cranial nerves with the exception of the right platysma myoïdes muscle. The patient had a club-foot from a spastic contraction of the left gastrocnemius muscle of fifteen years' standing, otherwise all the functions of body and mind were normal. No cause for this affection was determinable. The only remedy which had produced even a temporary amelioration was curare. The convulsions, slight in the beginning, had gradually increased in intensity and in the number of muscles involved. The author regarded the tonicity of the convulsions as indicating a spinal origin, since cerebral spasms are of a mixed tonic and clonic character, as in epilepsy. As to the question whether this slowly progressive disease was dependent upon a palpable lesion of the cord (sclerosis), or whether it was a disease in which the changes in the cord were unrecognizable by any means yet at our disposal, he declared for the latter, and designated it as a neurosis. Two brothers of the patient suffered from a similar complaint. The father had had syphilis.

The Treatment of Basedow's Disease.—From an experience in upward of seventy cases, and fortified by the unanimous observations of Von Dusch, Eulenburg, Meyer, Erb, and others, Dr. Chvostek is led to regard the rational employment of galvanism as the most important part of the treatment of Basedow's disease. He recommends the following method to be pursued: 1, the ascending constant current applied to the cervical sympathetic, on each side, for at the most one minute; 2, the same to the spinal cord (the anode at about the fifth dorsal spine, the cathode high up in the cervical region); 3, through the occiput (one pole at each mastoid process), and in certain cases also through the temples, a constant current, for at the longest one minute, and so weak that the patient can feel but the slightest sensation of burning. Sometimes also local galvanization of the thyroid gland with a weak constant current for about four minutes, the current to be reversed at the end of each minute. The applications should be made every day if possible. As a rule very good results were obtained, even in the most severe cases a cure or marked improvement being recorded. In three cases death resulted from excessive anæmia or complications.—*Centralbl. für Klin. Med.*, June 23, 1883.

A Loud-Sounding Heart Murmur.—Dr. Herman Tittinger describes a peculiar murmur, characterized by the distance at which it is audible (it can be distinctly heard through the bed-coverings), by its stability (it is but slightly influenced by the intensity of the heart's action), and by its character (it is composed of both a primary and an accessory sound). Together with the murmur is perceived a widely propagated tremor. This phenomenon occurs only with rupture of the valves or of the chordæ tendinæ in immediate connection with them. The primary murmur is caused by insufficiency of the valves, the secondary sound by the flapping of the loose valves and chordæ tendinæ in the returning blood-stream. A diastolic murmur indicates a rupture of the semilunar valves, while a systolic sound points to the (much less frequent) lesion of the mitral valve.—*Centralbl. für Klin. Med.*, June 9, 1883.

Epilepsy caused by Intestinal Worms.—The following case is reported by Dr. Windelschmidt in the *Allgem. Med. Central-Zeitung* of June 9, 1883. A woman, forty years of age, had suffered for six years from convulsions, epileptic in character, which were steadily increasing in frequency, until finally the attacks appeared every evening as soon as she lay down, lasting several hours and returning again toward morning. Upon questioning it was ascertained that she was troubled with large numbers of ascarides in the rectum and vagina. Vaginal and rectal injections of a bichloride of mercury solution were ordered, and in five days the attacks had wholly ceased. They returned once again upon the reappearance of the worms, but ceased after a few injections, and have never since troubled her.

Cystic Tumors of the Tongue.—Dr. Géhe divides lingual cysts into four varieties, viz.: serous, mucous, hydatid, and dermoid cysts. The serous tumors are situated ordinarily on the under surface and at the base of the tongue. They contain a clear, transparent fluid, and are lined upon their inner surface with pavement epithelium. The mucous cysts are found in the situation of the mucous glands, at the tip, sides, and between the tonsils. They contain a stringy fluid with crystals of cholesterin. Hydatid cysts (cysticerci, echinococci) are developed in any part of the tongue. Dermoid cysts are very rare and are always found in the median line of the organ. These are formed by a pushing forward of the blastoderm through the branchial fissure. Serous cysts arise from erectile tumors or from retained secretion. Mucous tumors are of inflammatory origin caused by myxangoitis leading to partial obliteration of the ducts. Severe symptoms arise only from inflammation of the sac. Hydatid tumors are the only ones that attain any considerable size, the others remain small and only interfere slightly with speech and mastication. They are always chronic in their course. The treatment of all forms of lingual cysts is the same. It consists either in transfixion by a piece of silk, which is left *in situ* and causes suppuration, in puncture, with or without subsequent injection of an irritating fluid, or in partial or total extirpation. Dr. Géhe prefers the latter procedure as being the least likely to cause trouble and the most radical.—*Centralbl. für Chirurgie*, June 23, 1883.

The Clay-Colored Stools in Jaundice.—Professor Gerhardt states that the clay-colored stools in icterus contain a great number of needle-shaped crystals arranged in bundles. Sometimes the quantity of crystals is so great that the fecal mass seems to be in great part made up of them. Their shape is suggestive of tyrosin, but mixed with the needle-shaped crystals here and there are little spheres resembling leucin. The fæces, when stirred up with water, settle in four layers. The upper layer is thin, milk-white, and consists almost wholly of fat drops. The three other layers (flaky, watery, and sedimentitious) contain the crystals in nearly equal proportion. Some of the clinical tests also show the presence of tyrosin. Since only colorless stools contain these crystals, there can be no doubt that their presence is in some way connected with icterus. But whether it is due to the continued action of the gastric juice in the intestines, or to the action or non-action of the pancreatic juice without the addition of bile, or whether it is a result of the decomposition of the ingesta in the intestine, are questions which the author leaves unanswered. He also suggests, without deciding the question, that this quantity of tyrosin in the intestine may be accountable for the appearance of the same substance in the urine. The white or whitish gray color of the stools proceeds from the presence of either fat or these tyrosin crystals.—*Deutsche Medicinal-Zeitung*, July 5, 1883.

Treatment of Wounds of the Bladder.—Dr. Julliard had the misfortune to make a rent nearly five inches long in the posterior wall of the bladder, while breaking up adhesions during an ovariotomy. Fifteen sutures were inserted, and the wound healed by first intention. The two serous surfaces were brought into apposition, care being taken not to include the mucous membrane, so as to avoid infiltration of urine alongside the threads into the connective tissue. Cat-gut sutures were employed, and a catheter was left in the bladder, so as to ensure perfect drainage of urine, and thus avoid any stretching asunder of the edges of the wound.—*Centralblatt für Gynäkologie*, July 7, 1883.

Treatment of Erysipelas.—In four cases of erysipelas Dr. Bogusch employed hypodermic injections of resorcine in a five per cent. aqueous solution. The injections were made along the border of the erysipelatous part, at a distance of about three lines from each other, the point of the needle being directed toward the diseased spot. In each case from thirty to seventy injections were made, and no other treatment was resorted to. The temperature fell rapidly and the spread of the disease was arrested. Dr. Tusbin employed hypodermics of bichlorhydrate of quinine in five cases of erysipelas. One or two injections sufficed. The reddened parts were painted with camphorated and carbolized oil. He never observed any ill effects to follow the injections, though others have reported numerous abscesses and indurations. This double salt of quinine, apart from its great solubility, is therapeutically in no way superior to the sulphate.—*Lyon Médical*, June 17, 1883.

Dietetic Treatment of Nutritive Disorders in Infants.—Dr. Biedert has treated a number of cases of infantile digestive disorders without drugs, by means of a strict regulation of the diet. The diseases thus treated were dyspepsia and dyspeptic diarrhœa, chronic catarrh, extreme atrophy (tabes meseraica), ulcerative enteritis, cholera infantum, and one case of supposed epidemic dysentery. The children were most carefully watched, and the greatest care observed in carrying out the minute details of treatment. From the results obtained the author feels himself justified in recording the following deductions (*Centralblatt für Klinische Medicin*, June 16, 1883): 1. A surprisingly large number of gastro-enteric disorders in infants stand in such close relation with the quality and insufficient quantity of food, that the diseases, even in the most serious cases, may be cured solely by the administration of a suitable diet. 2. The quantity of food given is of the greatest moment. 3. The nourishment must often be given in greatly diluted form. 4. The proportion of albumen to fat plays an important rôle. The digestion of albumen is facilitated by mixing it with a much larger proportion of emulsionized fat than is found in cow's milk—that contained in human milk being the proper amount. 5. It should not be forgotten that at times there is a diminished absorption of fat, in which case it should be greatly reduced in amount, or, in order not to interfere with the digestion of albumen, slightly reduced to a proportion midway between that of human milk and cow's milk.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, August 18, 1883.

PROGRESS IN THE REGULATION OF MEDICAL PRACTICE.

THE reports of the quarterly meetings of the Illinois State Board of Health generally furnish some interesting reading. The last report, covering the meeting of June 29, was no exception; and we give here some of the facts which were there presented, since they have much more than a local interest.

It appears that during the last quarter, certificates to practise medicine and surgery have been given to one hundred and ninety-two persons, while twenty-eight applications were refused. These latter applications were chiefly from "cancer-doctors" and from "natural physicians," one of whom wished "to travel through several States in order to cure their diseases, such as tape-worms, diseases of the stomach, skin, etc."

The secretary states that the resolution previously made to recognize the diplomas of the Indiana Eclectic College is likely to be revoked, owing to doubts about that college's honesty.

Measures are being adopted for the securing one common Examining Board on preliminary education for all the medical schools of Chicago. This would be a step forward which is to be greatly desired, and which should be attempted in other States.

An effort was made during the past quarter to secure the passage of a law which would get rid of advertising and lecturing quacks. The following bill was drawn up, and we insert it here:

"1. *Be it enacted:* That it shall be unlawful for any person or persons, professing to heal the sick or to remove deformities, to publish or otherwise set forth in the State of Illinois their powers, promises, or claims by any advertisement, card, circular, hand-bill, pamphlet, book, writing or lecture in the manner usual to the chronic or private disease specialist, or to solicit practice by agents or otherwise, in any but the ordinary methods of reputable physicians.

"2. That it shall be unlawful for any person or persons to furnish or sell, or to advertise for sale, any instrument, appliance, apparatus, drug, nostrum, operation, or other device, for the prevention of conception, for the procuring of abortion, or for any other criminal or immoral purpose.

"3. That each and every violation of this act, in any of its provisions, shall be punished by a fine of not less than fifty dollars nor more than five hundred dollars, or by imprisonment in a county jail for a period of not less than thirty days nor more than three hundred and sixty-five days, or by both such fine and imprisonment."

The bill passed to its second reading, and would probably have become a law if the Legislature had not adjourned sooner than was expected.

The class of persons whom it was intended to affect is well shown by the specimen letter which the secretary received from a correspondent in Farina, Ill.:

"Sir—Our village was visited a few days ago by a 'specialist' from Indiana calling himself Dr. Pickett. He came here to sell 'marriage guides,' etc., and to give private lectures. He was also a pretended phrenologist and gave charts. His private lectures were given to men and women separately, and in his last lecture he offered for sale a recipe or appliance of some kind which he warranted to 'prevent conception.'"

Dr. Rauch also reports the unearthing of another diploma mill. It is situated in the beautiful city of Milwaukee, Wis., and is called the "Milwaukee College of Medicine and Surgery." It claims to be legally incorporated, but it grants diplomas after attendance upon one course of lectures.

The report concludes with various facts regarding the existence and prevention of contagious diseases in the State.

HOW TO MAKE PHOTOGRAPHS EASILY AND CHEAPLY.

UNTIL recently medical men who wished to have a pictorial record of important cases were to a greater or less degree prevented by personal inability, or incidental inconveniences.[1] Photography by means of the "dry plate" has placed within the reach of the profession the means of securing a picture of any case, and this with but small outlay for apparatus and materials.

An outfit for taking photographs four by five inches can be purchased for ten dollars, and by substituting an imitation Dallmeyer lens for that of the outfit the expense need not much exceed fifteen dollars.

With such an apparatus pictures can be obtained amply sufficient for the record of cases.

Dry plates can be bought by the dozen, kept for any length of time before and after exposure, and developed at leisure.

A dark room for developing the plates can be extemporized by any dark closet, or in default of that, the operation can be performed by night. The light in the dark room must be non-actinic, and is secured by a lantern with red glass.

Photographic dealers supply a small manual giving all of the details. They are, in brief, as follows: The case is properly focussed on the ground glass of the camera, which is then replaced by a slide containing the plate.

The lens is uncapped for a few seconds, and as far as the patient is concerned the process is finished. At this stage the dry plate may be sent to a photographer for development and printing; but if not, and preferably not, it is taken to the dark room, placed in a pan, and a solution of oxalate of iron poured over it. When the picture comes out sufficiently, it is washed with a few changes of water and placed in another pan containing hyposulphite of soda.

[1] How to Make Photographs: a Manual for Amateurs. By T. C. Roche, edited by H. T. Anthony. Illustrated. New York: E. & H. T. Anthony & Co., 591 Broadway. 1883.

The hyposulphite dissolves off the undecomposed bromide of silver, and "fixes" or renders permanent the image. The negative thus produced will yield an indefinite number of pictures by the printing process.

PRINTING.—*Silver:* A strip of sensitized silver paper is placed on the negative in a printing frame and exposed to the light. It is then soaked in a solution of chloride of gold, or "toned," and finally "fixed" by placing it for a few minutes in hyposulphite of soda solution. It then appears as the conventional photograph. Cyanotypes, or blue prints, will serve for many purposes as well as silver prints, and can be made much easier. Any paper can be coated with a solution containing one part of ammonia citrate of iron, one part red prussiate of potash, and eight of water, dried and exposed as in the former case. The resulting print need only be soaked in plain water, when it appears as a bright blue.

Glass positives or transparencies are made by exposure in the printing frame and developed in a manner similar to the dry plates. They can then be used in the magic-lantern. It is important in photographing a case to have the subject properly lighted. This can best be done by placing the sitter at a window having a full view of the sky. There will then be too high a light on the window side. But by means of a sheet of white wrapping paper as a reflector, the light can be so proportioned as to make an exceedingly good picture.

Micro-photography. — Some excellent micro-photographs have been made by medical men. The same principles are involved in their production as in the ordinary photograph. The source of light may be a kerosene lamp, so arranged as to illuminate the microscopic slide by means of a bull's-eye condenser. Those who are interested in the subject can find an excellent article by Dr. R. L. Maddox, in *The British Journal of Photography Almanac* for 1883.

There yet remains an interesting point to consider in regard to the subject of photography by medical men, and that is as a recreation.

It can be asserted with confidence that there are few pursuits which may yield more agreeable recreation to the average professional man than the practice of photography. There is a peculiar fascination in placing the white exposed plate in the developing pan and watching the picture resolve itself out of nothing. It is akin to magic and loses nothing of its interest by repetition. By means of instantaneous plates the infant smile can be registered, and thus the personal interest of the operator can be extended to other members of the family. Country practitioners and those spending vacations in the country can bring back with them any pleasing landscape that may come under their observation.

It may be said, finally, that photographic amateurs as a rule never lose their interest, mainly for the reason that there are so many unsolved subjects which offer means of unlimited study.

WATER FOR INFANTS.

WITH the exception of tuberculosis, no disease is so fatal in infancy as the intestinal catarrh of infancy, occurring especially during the hot summer months, and caused, in the great majority of cases, by improper diet. There are many upon whom the idea does not seem to have impressed itself that an infant can be thirsty without, at the same time, being hungry. When milk, the chief food of infants, is given in excess, acid fermentation results, causing vomiting, diarrhœa, with passage of green or greenish-yellow stools, elevated temperature, and the subsequent train of symptoms which are too familiar to need repetition. The same thing would occur in an adult if drenched with milk. The infant needs, not food, but drink. The recommendations of some writers, that barley-water or gum-water be given to the little patients in these cases, is sufficient explanation of their want of success in treating this affection. Pure water is perfectly innocuous to infants, and it is difficult to conceive how the seeming prejudice against it ever arose. Any one who has ever noticed the avidity with which a fretful sick infant drinks water, and marks the early abatement of febrile and other symptoms, will be convinced that water, as a beverage, a quencher of thirst, as a physiological necessity, in fact, should not be denied to the helpless members of society. We have often seen an infant which had been dosed *ad nauseum* for gastro-intestinal irritability, assume, almost at once, a more cheerful appearance and rapidly grow better when treated to the much needed draught of water. If any one prescription is valuable enough to be used as routine practice it is—"Give the babies water."

HABITUAL NOSE-BLEEDING AND ITS TREATMENT.

CLINICALLY we may classify attacks of nose-bleeding under three heads: There are, first, the accidental and incidental attacks, which are common to all; second, there are the frequent and severe attacks which are liable to occur in cases of hæmalophilia, leucæmia, scurvy, morbus maculosus, etc., and in local disturbances where there are polypi, vascular hypertrophies, etc. But, besides these, there are cases, and every practitioner sees them, where the patient suffers for years from attacks of nose-bleed, and where no especial constitutional or local cause seems to be present. A number of German observers have been studying this condition, and recently Dr. O. Chiari gives in the *Wiener Medicinische Zeitung* a summary of their opinions, with some conclusions of his own. These latter are founded upon considerable personal study and have a practical bearing, so that we venture to present them here. Dr. Chiari believes that in most cases of what he terms "habitual nose-bleed," not dependent on injuries, catarrhs, polypi, etc., the hemorrhage comes from a circumscribed locality in the nose, which can generally be seen and reached. He has studied the history of twelve cases of nose-bleed, nine of the patients male and three female; most of them were young, the age varying between fifteen and twenty years. All had suffered from epistaxis for a series of years. The attacks occurred sometimes daily for a period, in other cases weekly or monthly. They differed in violence; in some cases being slight, in others alarmingly persistent. All the patients suffered from their trouble, there being such symptoms as headache, weakness, anæmia, mental annoyance, etc. The attacks were sometimes brought on by sneezing, blowing the nose, or slight mechanical violence; but oftener they occurred spontaneously, and sometimes even during sleep. In two cases only did the hemorrhage come from both nostrils.

Now Chiari states that in all his cases the source of the bleeding was a circumscribed spot, generally about the size of a millet-seed, which could be seen on the cartilaginous septum near its junction with the bony septum. By pressure upon this point bleeding could be stopped. He directed treatment to this point alone, applying generally the galvano-cautery, but sometimes the lunar caustic. Five cases were cured positively; five more did not return to his clinic; two were improved.

The position of the bleeding-point upon the nasal septum was confirmed by Hartmann's observations, and Chiari states that in twenty-two out of twenty-five observations it was found there. The ease with which the hemorrhage is controlled by properly applied compression, and the possibility of curing the trouble, make the observations of Chiari of especial interest.

DR. RUSSEL'S PAPER ON MALARIA.

WITHIN a few years malaria has become a bugbear, so to speak, in the Middle and Eastern States. Unlike other zymotic troubles in our vicinity, it is always with us on Manhattan Island and its surrounding regions. But its gradual and uninterrupted march into Connecticut and Massachusetts of late years, with entire disregard for those local conditions formerly considered as essential factors in its development, has led to renewed investigations into its causes and peculiarities. Therefore every contribution to such studies must possess a special value.

For this reason we call attention to the article by Dr. Charles P. Russel in the present number of THE MEDICAL RECORD. Dr. Russell is well recognized as an authority in matters of vital statistics, hygiene, and public health, and his views upon so interesting a branch of these subjects should command attention, notwithstanding that they seem to be in conflict with the traditional ideas of the profession, and even with the important discoveries, alleged to have been made more lately, of specific disease-germs.

Without in any manner endorsing Dr. Russel's opinions, we must acknowledge that they are supported by those of many other well-known medical men.

THE VICTIM OF IRREGULAR PRACTICE.—An inquest was held, July 26th, in the case of a woman who had died suddenly on July 17th. The jury found that death resulted from septicæmia, and expressed the opinion that it is the duty of the authorities to protect the public against unauthorized practitioners of medicine. Deceased was attended by Edward R. Duffy, who has had considerable practice but who calls himself a student of medicine. Duffy is not registered with the Health Department.

OBSTETRIC PROGRESS.—In a discussion by the Obstetrical Society of Washington on the induction of premature labor, one of the speakers remarked that he had heard a professor of obstetrics tell his class that he "believed the time would come when fashionable women would have their children at any time that suited their convenience during the last four weeks of pregnancy." What will the fossils who used to maintain that there was such a thing as "meddlesome midwifery" say to this?—*Obstetric Gazette.*

News of the Week.

THE CHOLERA AND YELLOW FEVER.—The meagre reports received at Washington during the past week would indicate that neither yellow fever nor cholera has made any progress toward obtaining a footing in the United States since our last issue of THE RECORD. The two yellow-fever ships in quarantine at the Capes—"Cape Charles quarantine station"—are reported by Surgeon Henry Smith, of the Marine Hospital Service, as clean and free from disease, the Andeau ready to take on a cargo, and the California only waiting for supplies before sailing for Liverpool. There are no infected vessels at the Pensacola or Mississippi quarantine stations, all such vessels having been sent to Ship Island, where they are undergoing the cleansing process necessary for their purification. The reported escape of two men from Ship Island has been officially denied, Passed-Assistant-Surgeon John Godfrey stating that they were from Cat Island and had never been in quarantine at that station. In fact, the crews of all vessels in quarantine, as well as all employees of the various stations, are mustered twice each day, so that escapes are difficult and would be discovered in a few hours. Before ships are permitted to leave quarantine their masters are furnished with a "discharge certificate" as follows:

"This is to certify that.....has been discharged from quarantine with permission to proceed to sea or port of destination. In my professional opinion no danger need be apprehended in allowing said vessel to discharge her cargo or ballast and reload for sea. But in no case will this certificate be held to allow the entry of any vessel until after examination and permission of the local quarantine authorities.

.....

Surgeon U. S. M. H. S., in charge.

A weekly report of vessels remaining, arriving at, and departing from the various quarantine stations is made to the Surgeon-General. This report gives the name of the vessel, date of arrival, where from, destination, cargo, condition of vessel, condition of cargo, number and sanitary condition of crew, number and sanitary condition of passengers, disease, number of cases, number of deaths, treatment of vessel and cargo at quarantine, date of departure of vessel from quarantine, and remarks. This report is signed by the officer in charge and forwarded weekly to the Surgeon-General's office. At foreign ports the sanitary inspectors, in addition to forwarding cable messages upon the departure of infected or suspected vessels, are required to send weekly abstracts of bills of health issued to all vessels bound to United States ports. These abstracts show the number of bill of health, date, name of vessel and rig, destination, sanitary condition of vessel, sanitary condition of cargo, sanitary condition of crew, sanitary condition of passengers, sanitary condition of port, and remarks. Under "remarks" a statement is made whether vessel had been at an infected dock, number of hours or days in port, and such other facts as may be of importance. At the bottom of the blank are spaces for showing the number of deaths from yellow fever, cholera, and small-pox during the week. This blank is

signed by the sanitary inspector of the Marine Hospital Service and forwarded weekly to the Surgeon-General.

Despatches from Vera Cruz of the 3d inst. state that the steamship City of Puebla sailed from that port for New York, and the steamship Statesman for Brazos on that day. Also despatch from Havana the 6th gives notice that the steamer Amethyst left four cases of yellow fever at that port, and sailed for Boston on the 4th. A barque arrived at Washington docks, Sunday last, direct from Trinidad, but had no sickness on board. She was spoken at the mouth of the Chesapeake, down at the Capes, and permitted to come up, as she was healthy and loaded with asphalt.

The Consul-General at Cairo, Egypt, in an official letter to the Secretary of State under date of July 5, 1883, reports that cholera had broken out in a few adjacent towns, the fact being first made public on June 20th, when it prevailed so extensively in the town of Damietta, a place of thirty-five thousand inhabitants, that concealment was no longer possible. The disease was officially pronounced true Asiatic cholera, but its source unknown. The general belief among the more intelligent citizens, including many physicians, was that it originated in Damietta, and resulted from the lack of proper sanitary regulations in that province. It appears that many cattle have been dying of late with a disease resembling epizootic; that their carcases were thrown into the Nile and adjacent canals leading into it; that the poor people fed upon these diseased animals and unripe fruit, and that cholera broke out among them from this cause. He further states that the towns of Mansura, Serbin, and Samanoud are similarly afflicted, but that the Egyptian Government is actively engaged in staying the epidemic by establishing sanitary cordons about the infected districts by competent officials, with every hope of arresting the disease.

On the other hand, the Consul at Smyrna, under date of July 13th, claims that the disease in Damietta is not Asiatic cholera, but is some other disease and is due to the unsanitary condition of the province. Be this as it may, the fact that it is not confined to Damietta, that it is gradually extending its area, and that the well-fed, well-cared-for British troops are among the sufferers, gives us every reason to regard the disease as a dangerous visitor and one that should be kept out of the country.

A letter from C. E. O'Hara, treasurer of the "Seymour Paper Co.," of New York, was received by Surgeon-General Hamilton recently, saying, "The problem with us is the future of the Alexandria (Egypt) rag business. We shall buy no rags for a long time to come, but what is the limit of time when it will be safe to move the rags to a market. An opinion from you on this point would be valuable, but I presume you are not prepared to give it. I have thought the matter over and can see no light. It may be of interest to you to know that five thousand to six thousand *tons* of rags are exported annually from Egypt, and nearly all come to the United States. . . . Of course all these rags must be put under the ban because a small portion, perhaps a ton, may be infected. If there is no outlet for them, most of them will be saved until the markets are open, and why not the infected with the others? The true remedy would be for the Egyptian Government to have the entire stock burned (paying for them first); but they won't do this, as it will benefit only the people of other countries, we may say England and the United States only, no other nations using more rags than they produce."

Surgeon-General Hamilton suggested dumping all rags into chlorine vats at Alexandria, before shipment, this of course would necessitate the presence of a trusted officer of this Government to see that the work was properly done. It is obvious no limit of time could be fixed when rags gathered in an infected country could be safely received into the United States.

Obituary.

JACOB S. MOSHER, M.D.,

ALBANY, N. Y.

Dr. Jacob S. Mosher, a distinguished physician of Albany, N. Y., was found dead in his bed on Monday morning last. Around him lay books and papers, and the lamp above his head was still burning. Death was evidently sudden, painless, and without a struggle.

He was born in Coeymans, March 19, 1834. He graduated at Rutgers College in 1853, and had the degree of Master of Arts from that Institution. He entered the Albany Medical College, from which he received the degree of Doctor of Medicine in 1863. Early in the ensuing year he entered the corps of volunteer surgeons for New York troops, and was attached to the Army of the Potomac as it lay before Petersburg. He was subsequently made Assistant State Medical Director of the State of New York, and went on duty at Washington. From 1869 to 1873 he was Surgeon-General on the staff of Governor Hoffman. Since graduating, Dr. Mosher settled at Albany, where he practised, except from 1870 to 1876, during which time he was Deputy Health Officer of the port of New York, first under Dr. Carnochan, and afterward under Dr. Vanderpoel. At the expiration of his term of office he spent a short time in England. Then he returned to Albany, and since that time has attended to a large and remunerative practice. He became a valued member of the Albany County Medical Society, and was its President prior to Dr. N. L. Snow, the present incumbent.

In the hospitals of Albany he was a faithful worker. So, too, it was with the Albany Medical College, of which for several years he was the right-hand man. He was Dean of the College of Pharmacy, of which he was one of the originators, and was President of the Alumni of the Albany Medical College.

Since 1866 he has been a member of the Board of Trustees of the State Normal School, and has fulfilled his duties with his usual care and thoroughness. He was also a Trustee of the Albany Female Academy. In 1878 or '79 he was President of the Young Men's Association. At the time of his death he was President of the Local Board of Health.

Dr. Mosher was literary in his tastes and had collected a fine library. His fancy ran toward engravings and etchings, of which he had a great many, and his judgment in regard to them was considered excellent. One of his "hobbies," as he once told the writer, was epics, and of the great religious poems of all ages and all countries he sought to have the best and choicest editions. In every respect he was a man of culture and refinement.

Dr. Mosher was married December 30, 1863, to Emma S., daughter of Jesse Montgomery, of this city. She died in 1879, leaving four sons and one daughter, who survive their parents. The oldest, "Monte," as he is called, is a student in Union College.

Dr. Mosher was a member of St. Paul's Episcopal Church, a member of the Alpha Beta Kappa Society, and also ranked high in the Masonic Order, belonging to Master's Lodge No. 5.

Reviews and Notices.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A.M., M.D., Professor of the Principles of Surgery and Clinical Surgery in the Jefferson Medical College, etc., etc. Second Edition, thoroughly revised. With sixteen Illustrations. 8vo, pp. 176. Philadelphia: Henry C. Lea's Son & Co. 1883.

Dr. Gross has been so long known to the profession that this little work will derive value from the high standing of the author, aside from the fact of its passing so rapidly into its second edition. This is indeed a book that every physician will be glad to place in his library, to be read with profit to himself and, it may be, with incalculable benefit to the patient. Besides the subjects embraced in the title, and which are treated of in their various forms and degrees, spermatorrhœa and prostatorrhœa are also fully considered. In regard to impotence and spermatorrhœa, usually ascribed to functional causes, the author considers these affections as due to reflex disturbances of the genito-spinal centre, and that they are almost invariably dependent upon some lesion of the prostatic urethra. The work is, moreover, thoroughly practical in character, and will be especially useful to the general practitioner.

Handbook for Hospitals. By the State Charities Aid Association. 12mo, pp. 263. New York: G. P. Putnam's Sons. 1883.

The present is the second edition of the above work, carefully revised and enlarged, in which all the general and internal minutiæ essential to hospital management and discipline, viz., the care of the sick, of the insane, the institution itself, hygiene, disinfection, pauperism, the distribution of public funds, and the establishment of village hospitals and of isolated cottages for infectious cases are presented, not only with completeness but with interesting detail, which will prove of service to all —the public at large as well as to the profession—who are either directly or indirectly interested or engaged in hospital work.

A Treatise on the Diseases of the Eye. By J. Soelberg Wells, F.R.C.S., Doctor of Medicine of the University of Edinburgh; Professor of Ophthalmology in King's College, London, etc., etc. Fourth American from the Third English Edition, with copious additions. Edited by Charles Stedman Bull, A.M., M.D., Lecturer on Ophthalmology in the Bellevue Hospital Medical College; Surgeon to the New York Eye and Ear Infirmary, etc. Illustrated with two hundred and fifty-seven engravings and six colored plates. Together with selections from the test types of Professor E. Jaeger and Professer H. Snellen. 8vo, pp. 846. Philadelphia: Henry C. Lea's Son & Co. 1883.

The work of Dr. Wells is so well known throughout the medical profession, that it scarcely needs especial commendation. The present edition appears in less than three years since the publication of the last American edition, and although the original text is not very materially altered, yet, from the numerous recent investigations that have been made in this branch of medicine, many changes and additions have been required to meet the present scope of knowledge upon this subject. Hence it may be well to mention in what respect this edition differs from its predecessor. The chapter on Diseases of the Lids is augmented by descriptions of Landolt's Method of Blepharoplasty, and by the editor's Method of Treatment of Depressed Scars of the Face. In Diseases of the Conjunctiva, an entirely new section on Purulent Conjunctivitis of New-born Children has been added, together with one on Membranous Conjunctivitis. Diphtheritic Conjunctivitis is also greatly increased by the addition of new matter. Sattler's views on the nature of Trachoma have also been added to the section on Chronic Granular Conjunctivitis. Under Diseases of the Iris and Ciliary Body, a new section has been inserted on the Comparative Physiological and Therapeutical Value of Mydriatics. The chapter on Sympathetic Ophthalmia has been enlarged, containing the discussion before the London International Medical Congress as to the seat of the lesion being in the optic nerve, together with the views of Mooren on the same topic; also additional notes upon the value of Optico-ciliary Neurotomy. The opinions of Priestley Smith and Brailey upon the Nature and Causes of Glaucoma have been embodied in the chapter on that subject. In the chapter on Diseases of the Vitreous Humor, the value of the magnet in the removal of particles of steel or iron from the eye receives greater consideration. The recent observations of Hughlings-Jackson on Optic Neuritis in Intracranial Disease are embraced in the chapter on Diseases of the Optic Nerve. Valuable additions are also noticed in Diseases of the Ocular Muscles. The editor's own views are furthermore introduced in the various sections throughout the work.

A critical examination at once shows the fidelity and thoroughness with which the editor has accomplished his part of the work, and he is eminently deserving the thanks of the profession. The illustrations throughout are good. On the whole, this edition can be recommended to all as a complete treatise on diseases of the eye, than which probably none better exists.

A Text-Book of General Pathological Anatomy and Pathogenesis. By Ernst Ziegler, Professor of Pathological Anatomy in the University of Tübingen. Translated and edited for English students by Donald MacAlister, M.A., M.B., Member of the Royal College of Physicians; Medical Lecturer of St. John's College, Cambridge. New York: William Wood & Co., 56 and 58 Lafayette Place. 1883.

This volume, containing 355 pages of reading matter, with 117 illustrations, is a part of the work being written by Professor Ziegler, and constitutes the seventh of the series in Wood's Library for 1883. The established reputation of the author places the work at once in the catalogue of valuable contributions to recent medical literature. It exhibits strongly the personality of the writer, a feature worthy of special commendation. Professor Ziegler advocates doctrines which may not be readily accepted, but they are not unreasonable, and it should not be argued, because of the difference of opinion on certain technical points, that his conclusions are necessarily faulty. They are given concisely and independently, and, by reason of their possessing these characteristics, are additional material worthy of careful study and comparison. To facilitate such work the translator and editor has, in an acceptable manner, given in brackets the views entertained by many of the most eminent observers on the points where Ziegler has advanced new theories. The translation seems to have been done well, and the annotations make an important part of the book. As a whole, the volume is another excellent one in the series for 1883. The second part—on Special Pathological Anatomy—is in course of publication in Germany.

The Medical Register of New York, New Jersey, and Connecticut, for the Year ending June 1, 1883. William T. White, M.D., Editor. New York: G. P. Putnam's Sons. 1883.

This annual volume presents its usual appearance, and is under its usual able editorial management. It contains the names of 5,969 physicians, distributed in the States of New York, New Jersey, and Connecticut. The New York City list contains 1,661 names, forty more than last year.

For a long period this book has been accepted as an authoritative register of the regular profession of New

York, New Jersey, and Connecticut, and in order to maintain such a reputation the greatest care should be taken on the part of editor and co-laborers to make it accurate and impartial. We notice one or two omissions in this regard, which, it is to be hoped, are simply accidental; otherwise the work is everything it should be.

THE BACTERIA. By T. J. BURRILL, Ph.D., of Springfield, Ill.

THIS is the title of a pamphlet giving a complete but concise account of the nature, kinds, and effects of the different bacteria. It is the best monograph on the subject we have seen, and is highly creditable to American science.

MEDICAL ECONOMY DURING THE MIDDLE AGES: A Contribution to the History of European Morals, from the Time of the Roman Empire to the Close of the Fourteenth Century. By GEORGE F. FORT. New York: J. W. Bouton. London: B. Quaritch. 1883.

UNDER the above somewhat delusive title, the author has written a kind of history of medicine. It is called "Medical Economy," because it deals with medicine more especially in its relation to law and society. As the full title shows, the book covers more than the middle ages. It takes up medicine at the time of the Ptolemies, traces the growth of the Alexandrian and Roman schools, and subsequently the progress of medicine down to the fourteenth century. The book shows a vast deal of erudition and research, if one may judge by the numerous references. It is not written, however, in so coherent and attractive a manner as it might be. In fact Mr. Fort has a bad literary style. There is a great deal in it, however, that physicians will find curious and interesting. Typographically the book is an excellent specimen of English work.

THE SANITARY ENGINEER, Vol. VII. 4to, pp. 620. New York: Henry C. Meyer. 1883.

THE seventh volume of *The Sanitary Engineer* includes the twenty-six weekly issues from December 7, 1882, to May 31, 1883. Among the articles of permanent value may be mentioned "Letters to a Young Architect on Heating and Ventilation," by Dr. J. S. Billings, U.S.A.; "Steam Fitting and Steam Heating," by "Thermus" (a series—illustrated); "The Edison System of Wiring Buildings for the Electric Light" (illustrated); illustrated descriptions of the sanitary arrangements in the residences of Cornelius Vanderbilt, Esq., the Berkshire Apartment House, Home for Aged Females, and the Duncan Office Building; "The Steam Heating Companies in New York" (illustrated description of); full abstract, with illustrations, of the records in the McCloskey Patent Suit for Trap Ventilation; "The New York Water Supply," a series of articles on the suppression of waste of water, giving the experience of European cities in attempting to deal with this problem, the practice now in vogue there, and the situation in American cities—these articles will be found of great value to water works authorities and all who are interested in this question; a discussion of the various projects for increasing the water supply of New York, including the Croton Aqueduct scheme, appears in almost every number in this volume; "Atlantic Coast Resorts," a report by E. W. Bowditch, C.E., to the National Board of Health; "National Board of Health," Congressional Debates on the; "How the Plumbing Law is Enforced in New York," a description of the methods employed by the department; "Germs and Epidemics," by Dr. John S. Billings, U.S.A.; "Malaria" (a series), by George M. Sternberg, Surgeon U.S.A.; "Lead Burning," apparatus and process described; "Gas-Fitting in an Office Building," description of work in Mills Building; "American Practice in Warming Buildings by Steam," by the late Robert Briggs, M. Inst. C.E.; a paper read before the Institution.

There is also the current information of the operation of the food adulteration laws; record of rulings and prosecutions, and copies of laws. The weekly and monthly mortality table of the principal cities of the United States, together with a large amount of home and foreign health notes.

Correspondence.

COPPER AND CHOLERA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The occurrence of a case of cholera in London makes the three thousand miles of Atlantic Ocean between it and New York seem but a slight barrier. The apprehension already felt since its appearance on the shores of the Mediteranean is at once increased. It is a scourge, according to the *Tribune*, which "has defied the medical science of the present century." It is true that the epitaph of many victims might read, "physicians' skill was vain;" nevertheless may it not be said that it has saved many others?

Incidentally the Paris correspondent of THE RECORD of July 7th has referred to a part of Dr. Burq's theory in regard to the use of copper in cholera, that of giving it internally. Slight, if any, mention is made of it in the treatment of cholera as set forth in text-books, encyclopædias, and general works of medicine, although it is now more than thirty years since Dr. Burq has advocated it and regarded it as a valuable, if not an unfailing remedy.[1]

In his experiments with copper in 1848, at which time he made the discoveries which led to the introduction into medicine of the external and internal use of metals as therapeutical agents, he found that copper was efficacious in allaying spasms; from this, coupled with the fact that workers in that metal almost always experience an immunity from cholera, he obtained the idea of using it in the severe cramps of that disease in the epidemic of 1849. His treatment consisted in placing plaques or disks of copper over the stomach as well as the internal administration of the sulphate.[2]

Rostan, in his "Leçons Clinique sur le Choléra," says that the use of the copper armatures was almost always attended with success.[3]

The fact that the copper workers escaped cholera is recognized in Paris by *chefs* of that industry: scientists and *savants* of France, Italy, Sweden, and Russia. It was confirmed by the results of the investigations of the prefecture of the police after the epidemic of 1865–66, as well as by the reports of M. Levy in 1867, M. Vernois, in 1869 and 1874.

Dr. Panchon says that an impregnation of the system with the dust of copper obtained by workers in it has insured an immunity in all the epidemics of cholera, a preservation not less certain than vaccination in small-pox.

It might be added, in passing, that artizans in these metals also escape typhoid fever. A society of bronze-workers, during a period of thirty-six years, lost no member from typhoid fever. In the epidemic of this disease in 1876, only two deaths occurred among thirty thousand workers in copper, and it was a noteworthy fact that these two had to do only with large pieces.

It has not been recorded, so far as I am aware, that insufflation of copper-dust has been practised as a prophylactic measure in cholera epidemics; but Dr. E. Mailhet,[4] a physician in the East, having read Dr. Burq's articles on the use of copper in cholera, when an epidemic broke out near where he was stationed, caused belts of the metal to be worn over the abdomen as a preventive

[1] Des Origines de la Metallotherapie, Gaz. des. Hôp., 1882, p. 522.
[2] Ibid., November, 1849.
[3] Ibid., Avril, 1880, p. 299. Compt. Rend. d. Soc. Biol., 1879.
[4] E. Mailhet: Choléra et Emploir du Cuivre; Gaz. des Hôp., 1877.

measure. Six hundred persons were thus fortified. In an adult population of three thousand, one hundred were attacked with cholera and cholerine, but not one of those who wore the copper plaques were among the number, nor was any old woman who wore a small *scapulaire* of copper of the dimensions of half a franc.

These facts and results are certainly very suggestive, and deserve more consideration than they have received, judging from the little that has been said or written about them. Perchance the very simplicity of the measure has caused it to be overlooked or set aside as contrasting too markedly with the gravity of the disease.

GRACE PECKHAM, M.D.

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THE ELIZABETHAN DRAMATISTS AND LATER POETS ON THE PRINCIPLES AND PRACTICE OF PHYSIC.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It occurred to the writer that a brief compilation of excerpts bearing (or seeming to bear) on medical practice, from the works of the dramatic contemporaries of the great sovereign poet (those lesser lights around the central sun), also those of some of the poets of the seventeenth and eighteenth centuries, might be worthy the attention of members of our profession. If it show naught else, it will serve to make manifest how important an element and factor physic has ever been both in life and literature; being, as it were, woven and immeshed in the warp and woof of this our mortal life. Hence an *historic* and *literary*, in addition to the intrinsic and scientific, interest attaches to medical practice. Furthermore, unquestionably it is good for us as practitioners occasionally to step outside the exclusive boundaries of the strictly scientific aspects of physic, and to regard our art from other and different stand-points. For medicine (in its largest and most catholic sense) is so interwoven with human weal and woe, that it is as impossible as it would be undesirable to separate it from the great general currents of life and thought.

First comes great MARLOW with his "mighty line:"

1. INSOMNIA.

"So that for want of sleep and sustenance
My mind's distempered."
—MARLOW: *Edward II.*

2. INSANITY.

——"yet they do act
Such antic and such pretty lunacies
That spite of sorrow they will make you smile."
—DEKKER.

3. PYÆMIA.

——"conveys infection
Dangerous to the heart."
—JOHN FLETCHER: *Faithful Shepherdess.*

4. SENILITY AND LUNACY.

"Grows lunatic and childish for his son."
—THOMAS KYD.

5. ARTERIAL AND VENAL CIRCULATION.

"My blood flew out and back again as fast . . ."
—BEAUMONT AND FLETCHER: *Philaster.*

6. DISSECTION ROOMS.

"For they are able to putrify it, to infect a whole region."
—MIDDLETON: *The Witch.*

7. HYGIENE.

"I'll walk to get me an appetite; 'tis but a mile."
—MASSINGER.

8. SANGUINEOUS CIRCULATION.

"What an elasticity in her veins and arteries."
—SIR RICHARD STEELE: *The Constant Couple.*

9. ADIPOSITY.

——"Exercise will keep me from being pursy."
—MASSINGER: *A New Way to Pay.*

10. SURGERY.

"Why, sir, there are above five hundred surgeons in town."
—GEORGE FARQUHAR: *The Constant Couple.*

11. PHYSIC.

——"you have broke the *patent medicine* chest, that was to keep hem all alive."—MORTON: *Speed the Plough.*

(N.B.—This excerpt is interesting as being an early reference to *patent* medicines!)

12. LACHESIS.

"I eat snakes, my lord, I eat snakes."
—DEKKER: *The Honest W.*

(N.B.—The homœopaths have a remedy they call *lachesis*, supposed to be made from serpent-poison; and in the back towns of Italy *viper-broth* is still occasionally used.)

13. CEPHALOTRIPSY.

——"and offer luke-warm blood of new-born babes."
—MARLOW: *Dr. Faustus.*

14. BOTANIC PHYSIC.

"What herbs hast thou?"—MIDDLETON: *The Witch.*

15. PREGNANCY.

——"her midwives, her nurses, her longings every hour."
—BEN JONSON: *The Alchemist.*

16. AGUE-CAKE AND SPLENOTOMY.

——"your spleen; out with it,
I know you're like to burst."
—GEO. FARQUHAR: *The Constant Couple.*

17. VINUM OPII.

——"and the opiate that brings me sleep."
—TH. MORTON: *Speed the Plough.*

18. CONSTIPATION.

"When will your costiveness have done, good madam?"
—CARTWRIGHT: *The Ordinary.*

19. QUACKERY.

JOHN CASE, a quack of James II.'s time, like Mr. Wegg, occasionally dropped into poetry. He put the following distich over his door, by means of which, it is said, he made more money than ever Dryden did by all his poetry:

"Within this place
Lives Doctor Case."

20. LACTATION *vs.* "BOTTLE-BABIES."

"When thou shalt breed thy child, nurse it with thine own paps."
—MARLOW.

21. APOPLEXY.

"Flat on the ground and still as any stone,
A very corpse, save yielding forth a breath."
—THOMAS SACKVILLE (A.D. 1559).

22. GINSENG (*panax quinquefolium*).

"Here's *pannax* too. My pan akes, I am sure, with kneeling down to cut 'em."—MIDDLETON: *The Witch.*

(N.B.—This drug, on which Dr. Piffard, of New York, lately prepared a valuable paper, is to-day, and has been for centuries, the Chinese panacea. It sells in Peking for its weight in gold.)

23. AMAUROSIS.

"O dark, dark, dark, amid the blaze of noon."
—MILTON: *Samson Agonistes.*

24. PREGNANCY.

"I have heard that great-bellied women do long for things that are rare and dainty."—MARLOW.

25. IODOFORM AND ASAFŒTIDA.

——"your stench it is broke forth."—JONSON: *Alchemist.*

26. CINCHONA.

"And yet more medicinal is it than moly."—MILTON: *Comus.*

27. CARDIAC HYPERTROPHY.

——"Into the solid heart——"—FLETCHER.

28. AUTOPSY.

(*Cadaver, log.*)

——"Yet send me back my heart and eyes."—JNO. DONNE.

29. MAMMARY ABSCESS.

"But why that bleeding bosom?"—POPE.

30. LEUCORRHŒA.

——"it was a weakness in me,
But incident to all our sex."
—MILTON: *Samson Agonistes.*

31. SYPHILIS.

"He'll feel the weight of 't many a day."—COWLEY.

32. LUXATION OF INFERIOR MAXILLA.

——"with gaping mouth."—SPENSER.

33. LOCOMOTOR ATAXY.

"Obliquely waddling to the mark in view."—POPE: *The Dunciad.*

34. MORPHIA SULPHATE.

——"the virtue of this magic dust."—MILTON: *Comus.*

35. OPHTHALMIA TARSI.

"Have you your ointments?"—MIDDLETON: *The Witch.*

36. ANASARCA.

"I fondly thought he could not live a year,
But now his dropsy's better."
—INCHBALD: *Every One Has His Fault.*

37. ACONITE.

——"among the rest a small unsightly root
But of divine effect."—MILTON.

38. Bronchitis.
——"and his cough,
Not the least chance for that to take him off."—Inchbald.

39. Podagra.
"Sir Tristram Testy worn with age and gout.
Within all spleen, and flannel all without."—*Ibid.*

40. Beastly Remedies.
"Learn from the beasts the physic of the field."—Pope.

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TAYLOR'S METHOD OF EXTRACTING CATARACT.

To the Editor of The Medical Record.

Sir: There has been much said and written of late in reference to a new method of extraction of cataract, in which the incision is made wholly within the cornea, and without excision of the iris; and there seems to be an impression that Galezowski is the originator of this method. As the meed should belong to him who has really earned it, and especially for such a valuable contribution to ophthalmic surgery, I draw your attention to the fact that Dr. Charles Bell Taylor, of Nottingham, England, is the real originator of this operation.

In the *London Medical Times and Gazette* of February 12, 1876, it states that at a meeting of the Clinical Society on January 28th of that year, under the head of "A New Operation for Cataract," "Dr. Charles Bell Taylor, of Nottingham, introduced patients who had undergone extraction of cataract by a method which he had adopted in favorable cases since 1865. The lens, he said, was removed through a small flap, the base of which occupied a position about midway between the horizontal diameter of the cornea and the corneo-sclerotic junction. The wound healed readily. There was no subsequent astigmatism, and as there was no trace of the operation a few weeks after its performance, the lower section, on account of its greater convenience, was selected. The patients introduced were said to be average examples, had central and movable pupils, and all trace of the operation was so completely effaced that it was impossible to say whether the flap had been made upward or downward, or that the patient had undergone an operation.

"Dr. Taylor stated that the highest amount of visual acuity obtainable after extraction was secured in this way, some of the patients declaring that they saw as well as ever in their lives before."

Further on in the proceedings of the society, Dr. Taylor took occasion to specify the kind of cases in which the operation was performed without an iridectomy: "Where the pupil dilated well under the influence of atropia there should be no iridectomy. When the pupil did not dilate well with atropia, and where there were adhesions, or when it (the iris) became wounded during the removal of the lens there should be an iridectomy."

Dr. Macnamara in discussing the cases of Dr. Taylor, said: "the results of the operation were splendid." He thought that excision of the iris was generally uncalled for in the extraction of cataract, certainly in those cases where atropine dilated the pupil.

Dr. Watson congratulated Dr. Taylor upon the results in his cases, and said he "could detect no trace of the operation upon the cornea except by means of a magnifying glass."

Dr. B. Carter had seen so many of Dr. Bell Taylor's beautiful results that he "could quite endorse Mr. Watson's last statement." At the same time he thought that removal of the iris left the eye in a better condition for healing. He discouraged the operation without iridectomy, and claimed "that the optical results were never below the standard obtained in the cases without iridectomy."

In my own practice I have followed the suggestions of Dr. Taylor since reading the proceedings of the society in 1876, and have been gratified with the results.

One gentleman, seventy-seven years of age, who was operated on three years ago, writes me and says he sees as well as he did twenty years ago. Another gentleman wrote me of his wife, who was sixty-seven years of age when I operated on her eyes four years ago, and says that "she can see to read, and thread a fine needle." I have operated on as many as seventeen successive cases in the manner described by Dr. Bell Taylor without a single failure, and with the most gratifying results in every case.

I own that I owe my success in this line of practice to Dr. Taylor, and hope the honors may rest where they belong.

I. W. Wright.

Columbus, O., August 8, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 4, 1883, to August 11, 1883.

Magruder, David L., Lieutenant-Colonel and Surgeon. Leave of absence extended one month. S. O. 89, Military Division of the Missouri, August 4, 1883.

McParlin, Thomas A., Lieutenant-Colonel and Assistant Medical Purveyor. Relieved from duty in charge of the purveying depot in San Francisco, Cal., to take effect September 1, 1883, and will then proceed to New York City and relieve Assistant Medical Purveyor, Ebenezer Swift, of the charge of the purveying depot in that city. Assistant Medical Purveyor McParlin will transfer all funds and public property in his possession to Medical Storekeeper Henry Johnson, who, until further orders, will perform the duties of Acting Assistant Medical Purveyor, at the purveying depot in San Francisco. S. O. 183, par. 5, A. G. O., August 9, 1883.

Forwood, William H., Major and Surgeon. To proceed to Fort Washakie, Wyoming, and Fort Ellis, Montana, on public business and return. S. O. 87, Military Division of the Missouri, August 2, 1883.

Woodward, Joseph J., Major and Surgeon. Leave of absence granted on account of sickness, by S. O. 34, extended six months. S. O. 179, A. G. O., August 4, 1883.

Banister, John M., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

Carter, William F., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of Texas, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

Kane, John J., First Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Missouri, and assigned to duty in the Department of the East. S. O. 183, par. 5, A. G. O., August 9, 1883.

Byrne, Charles B., Captain and Assistant Surgeon. Relieved from duty at Fort Craig, N. M., and assigned to duty at Fort Lewis, Col. S. O. 161, par. 3, Department of the Missouri, August 6, 1883.

Lauderdale, John V., Captain and Assistant Surgeon. Granted leave of absence for two months, to take effect on or about the 15th instant. S. O. 90, par. 2, Department of the Missouri, August 6, 1883.

Owen, W. O., Jr., First Lieutenant and Assistant Surgeon. To proceed from Vancouver Barracks to Fort Walla Walla, W. T., and report to the commanding officer of the latter post for temporary duty. S. O. 101, Department of the Columbia, July 27, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 11, 1883.

GATEWOOD, J. D., Passed Assistant Surgeon. Orders to the Trenton revoked and ordered to the Kearsarge.

SCOTT, HORACE B., Assistant Surgeon. Detached from the Receiving Ship Franklin at Norfolk on the 30th inst., and ordered to the Trenton on September 1st.

AUSTIN, A. A., Passed Assistant Surgeon. Detached from the Richmond and waiting orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 14, 1883:

[Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 7, 1883.....	1	46	32	1	49	34	0	0
August 14, 1883.....	0	53	28	2	36	25	0	0
Deaths.								
August 7, 1883.....	1	10	2	3	12	18	0	0
August 14, 1883.....	0	10	4	2	16	15	0	0

THE QUESTION OF THE LEGAL RIGHTS CONFERRED BY THE POSSESSION OF MEDICAL DIPLOMAS.—Dr. Rauch, Secretary of the Illinois State Board of Health, says, in his last quarterly report: "This occasion may be taken to offer a word or two of comment upon the impression which obtains in certain minds concerning the sacred rights of 'legally-chartered colleges,' and the virtues which inhere in anything called a 'diploma,' no matter whence it emanates. The latest form in which this has found expression is as follows: 'If a physician be such by virtue of the laws of the State of New York has the State of Illinois power to disqualify him for practise? If she should attempt this, there can be but little question that an issue will be taken in some case for final presentation at the bar of the Supreme Court of the United States.' The question in the above is based upon an erroneous impression as to the rights, privileges, and immunities which medical colleges can confer with their diplomas. The assertion which follows, and which seems intended to forestall answer to the question, is based upon want of familiarity with important facts connected with the medical profession in Illinois. To correct this latter, it is only necessary to point out that in the enforcement of the Medical Practice Act in this State, hundreds of physicians, who were such by virtue of the laws of New York or of other States, have been disqualified from practice in this State during the past six years; and that scarcely a day—never a week—passes when one or more such physicians are not so disqualified and leave the State (*vide* the reports and records of the State Board of Health, *passim*). The error as to the rights conferred by the diploma of a college chartered in accordance with the laws of any given State—which is, probably, what is meant by 'a physician by virtue of the laws,' etc.—has been corrected more than once by the courts, and in the publications of this Board. While it is true that every man has a natural right to follow out the bent of his inclination, and to be a clergyman, a lawyer, a doctor, a scavenger, a peddler, an auctioneer, just as he may choose, it is not true that a man can practice any of these professions or occupations except he does it upon such terms as the law imposes; and the law can impose just such terms upon any one of these professions or employments as the legislators in their discretion deem best for the interest of the community. A legally-chartered medical institution in New York, or in Wisconsin, or in Missouri, or Massachusetts, may graduate its 'students' and endow them with diplomas conferring upon them the rights and privileges of doctors in medicine—subject to the laws, not only of the State but of the community in which they practise. But when such 'physicians' enter Illinois to practise, they must conform to the Illinois law. The right to practise medicine is not a constitutional right, nor a right inherent in the law of nature, nor an absolute right conferred by a college, whether specially chartered or otherwise. It is a statutory right, subject to the control of the Legislature; and the Legislature of this State has prescribed the terms and conditions upon which it may be exercised in this State. Among these terms and conditions is one to the effect that the practitioner, if a graduate, shall present the diploma of a college in 'good standing'; and it devolves upon this Board, by the terms of the law, to determine what colleges are, and what are not, in 'good standing.' Only the graduates of such—with exceptions not pertinent for consideration in this connection—may practise medicine in Illinois, no matter what rights the laws of another State may confer in that State. It has seemed necessary to say this at the present time—without any reference at all to Springer of Hardin, and the President of the St. Louis Eclectic—for the reason, among others, that it is a matter of importance to the student of medicine, intending to practise in this State, that he pursue his studies at colleges which comply with the requirements of this Board."

THAT JUDICIOUS COUNCIL.—In referring to the clause which the Judicial Council of the American Medical Association had inserted on the slip which delegates were obliged to sign at the late meeting, and which was but a covenanting anew with the Code of Ethics, the Philadelphia *Medical Times* says: "We cannot, however, close without a word of praise for the dexterity which was shown in so strangling all ethical rebels that none of them succeeded in crossing the sacred Æsculapian threshold, and the shades of Hippocrates suffered no dishonor or distress over unseemly bickerings and disputings." The *Canada Lancet* ventures to predict that "this attempt at coercion will be followed by a reaction, which will have the directly opposite effect of what was intended."

LEMON-JUICE AND OYSTERS.—Many popular usages in ordinary life have been adopted either by instinct or from empirical notions, and thus it is a common practice to use lemon-juice with raw oysters. It appears, however, from the researches of M. Certes, a distinguished microscopist and biologist, that this practice is not only a matter of taste, but that it has its utility, as lemon-juice has the property of destroying the animalcules which infest the stomach of oysters. The moral to be drawn from this is that oysters must be cooked, or, if eaten raw, should be accompanied by lemon-juice to avoid the possible evil consequences of parasiticism.—*Lancet.*

THE FUNCTIONAL INDEPENDENCE OF EACH CEREBRAL HEMISPHERE has been demonstrated by Dumontpallier in the following experiments: An hysterical epileptic woman was hypnotised by pressure upon the vertex. She was told to take up the knitting which was laying by her side. She took it with both hands and commenced knitting. A pressure upon the left parietal bone arrests the motion of the right hand, while the left continues to work. The like effect is produced on the left hand, when the right parietal is pressed upon. Pressure upon the crown of the head causes her to awake. Consequently central pressure causes equal reflex action upon both hemispheres, while lateral pressure affects only one hemisphere, the opposite of the pressure. He provoked

illusions, hallucinations unilateral or bilateral. Another patient is hypnotized by a look. He places the tips of her finger upon her lips, and stays her arm as if about to throw a kiss. She maintains that position with a smiling expression of the left side of her face. At the same time he brings her right arm into the position, as if wanting to repel some unpleasant object. She retains this attitude, the right side of her face assumes the expression of horror, while the left side smiles. The firm angered features of a commander are seen on the right side, those of gentleness and benevolence on the left side. In this experiment the muscular action of each side has excited in the contralateral hemisphere a sentiment or an image which manifested itself in the same side of the face.

THE CODE OF ETHICS. — Referring to the pledge exacted of members who presented themselves for registration as members of the American Medical Association, the *Peoria Medical Monthly* says: "The whole thing was an insult to the members of the Association, especially to those who had previously attended. It looked very much like applying the gag to keep the mouths of any opponents to the Code closed. It certainly gained no friends for the Code party, and really alienated many who were not previously opposed to it."

PROSTITUTION IN FRANCE.—In a recent work by M. Armand Després, of the Paris Faculty, devoted principally to statistics, and written in opposition to the recognition and licensing of the social evil by the State, the following figures are given (*Medical and Surgical Reporter*): There are in France 15,057 registered prostitutes, 7,859 belonging to maisons de tolérance, which number 1,328; 7,198 prostitutes are what is termed en carte—they live in their own rooms and appear at certain stated times (once monthly) for examination. Besides this prostitution recognized by the law, there is another, the individuals exercising it escaping as best they can the attention of the police. The number of free prostitutes is thought to be about 41,000. M. Després asserts that where prostitution is regulated by the State, and the danger from infection thus obviated, marriage is thought of later in life, and increase of population reduced to a minimum.

STATISTICS OF CONSUMPTION.—Dr. Playter, of Toronto, has gathered facts in regard to consumptives from 250 doctors. Their replies showed that the average age of patients was twenty-seven; 46 per cent. were males, 54 per cent. females, and 28 per cent. were married. The average size of the chest was 31½ inches; the chest of persons of the same average height, 5 feet 5½ inches, would usually average 37 inches. About 55 per cent. had light hair and eyes, two-thirds did in-door work, had slept in small rooms, and wore no flannels. Only 46 per cent. had consumptive ancestors, and a majority were of nervous temperament.

THE PREDICTIONS OF GUITEAU.—The following curious paragraph, which is decidedly sensational and but partly true, is being circulated by English papers: "It is well known that Guiteau, the assassin of President Garfield, when upon the point of being condemned, made a prediction of sundry recompenses which would fall upon those who had contributed to his condemnation. Struck by a powerful malediction, its effects would promptly overtake them. That prophecy, says our correspondent, is being accomplished with startling rapidity. The wife of the attorney of the Corkhill district, who displayed so much ardor in the pursuit of Guiteau, died immediately after his condemnation. So died Surgeon-General Barnes, whose deposition was most hostile to Guiteau. Dr. Noble Young is also dead. Porter, the judge, whose 'charge' was so violently pronounced against the criminal, is in shattered health and incapable of duty. The marshal Henry, the bailiff Stahl, the detective McElfresh, Perry Corson, the guard, and James Leonard, the prison coachman, are destitute. The Rev. Mr. Hicks is pursued by defamation. Dr. Grevy has been killed in an asylum for the insane. Dr. McDonald is troubled on account of his administration of Ward's Island, and is the subject of Government inquiry. The sergeant, Mason, has been for a long time in prison, while his wife and a lawyer are fighting over some thousands of dollars subscribed by the enemies of Guiteau. The wife of one of the jurymen (Hobb) has died, and the juryman Mike Scheban has been struck by madness. Thus ends for the present this 'tale of woe.'"

MEDICINE AT PRAGUE.—Dr. Councilman writes to the *Maryland Medical Journal*: "At present there is a great rivalry and a degree of hatred, difficult to overestimate, between the Germans and the Bohemians. It has finally reached such a pitch that the latter refuse to have anything to do with the Germans, refuse to learn their language, and this fall they will have a new university, in which all the lectures will be given in Bohemian. As the Bohemians have never been very celebrated for their scientific or literary acquirements, and as no one would learn their language, even for the sake of being professor, the number from whom their professors must be chosen is necessarily a limited one. Stricker's assistant in Vienna, Spina, who lately has written an article on the poor, much maligned tubercle bacillus, an article which almost rivals the classic production of Schmidt on the same subject, has been called to the chair of General Pathology, and the other chairs will also soon be filled."

SINGULAR DEATH-RATE IN PENITENTIARIES. — The death-rate in the principal penitentiaries or prisons in the country furnishes a notable feature in the report of Dr. Gill, of the Illinois Prison, the variations in the different institutions being almost incredible. Thus, among New York prisons, while at Sing Sing the yearly deaths from one thousand inmates number, as stated, a trifle less than seven, at Auburn it is given as twelve, and at Clinton over twenty. The lowest rate named is three in Wisconsin, and the highest, seventy-seven, in Mississippi. The practice of "letting" convicts for work on mines and railroads is declared to cause fearful death-rates in several Southern States, but, on the other hand, the New Hampshire figure is forty-eight. The rate in Massachusetts is given as fifteen, in Maine the same, in Vermont twenty-five, and in Connecticut fifteen. Pennsylvania has six in the western and fourteen in the eastern district.

THE HUMBUG OF CONSULTATIONS.—A certain well-known physician, who enjoys the distinction conferred by a titled name, was recently called into the country for consultation with the personal attendant on a noble lord. After a stay proportioned to the gravity of the case and the social importance of the illustrious patient, the eminent physician departed for the station, mutual satisfaction having resulted from the visit. While pacing the platform, however, the centre, we may be sure, of concentrated village admiration and awe, the great light of modern medicine was suddenly confronted by a breathless but much beliveried minion of the sick nobleman, who, with many apologies uttered in his master's behalf, begged the M.D. Bart. to supplement the directions he had already given with information respecting the merits of grapes as an article of diet for the invalid. The request was received with a gracious bow given in approving recognition of the thoughtful nature of the application, and then ensued a spectacle of sublime significance. For about a minute the eminent one slowly paced in pondering thoughtfulness, and then gave forth, as a result of full consideration of an important, nay, vital, problem: "Tell his lordship that he may eat grapes, but *white ones only;* be sure and impress this upon him—that he must on no account touch any others; white ones, and no more than six per day." The fast-coming express just then approached the station, and while the great one sped away to the London anxiously awaiting him, the awe-struck servant returned to tell the tale, how the vast

intellect of the mighty consultant could even discriminate between the harmless influence of white grapes and the poisonous properties of colored ones. This little narrative was communicated to me by "one who knows" on Sunday last; and it has seemed to be worth repeating as an example of the refinement to which the humbug of consultation may extend. It is palpably clear that any such exhibition as that described above could ever be indulged in with one intent only, and that the magnification of the exhibitor's claims to knowledge.—*London Medical News.*

ANOTHER CASE OF THOMSEN'S DISEASE.—Dr. Schönfeld, assistant-surgeon in the German army, has reported a case of this disease, concerning which we wrote a short time ago. Hitherto the number of cases reported has been very few, and most of them were confined to one family. Schönfeld's case was that of a young recruit who was bitten in the leg by a dog, very severely, six years before. The fright and injury were thought to have been the active cause of the disease.

CONCERNING PARASITES IN THE LUNGS.—Dr. R. Van Santvoord, of New York, writes: "Your correspondent, Dr. Mann, of Portland, Oregon, will find in the London *Lancet*, of March 31, 1883, page 532, an article by Dr. Maurer, of Amoy, China, on "Endemic Hæmoptisis," which may be of service to him in connection with his reported cases of "Parasites in the Lungs." The "Endemic Hæmoptisis" of Dr. Maurer is also of parasitic origin, but the parasites in his cases were represented in the sputum by ova only, the adults being found post-mortem in the air-passages, and differing apparently from those coughed up by Dr. Mann's patient."

MOIST HANDS.—Mr. H. A. Smith writes, in the *British Medical Journal:* Moisture of the hands (local hyperidrosis) is a purely functional disorder of the skin, due to disturbances of the nervous system. Stout women, generally servant girls, suffer from it, although the fair votaries of the ball-room and members of good society, together with those of lithe and nervous habit, occasionally come under notice. It may or may not be attended with pain and inflammation, dysidrosis or fetor-osmidrosis, or, more rarely, pigment-chromidrosis. As a rule, the axilla and feet sympathize more or less. As the condition appears to be due partly to abnormal vascular conditions, but mostly to irritability or undue stimulation of the vaso-motor nerves, probably of central origin, the following lotion will be found exceedingly useful:

℞. Liq. plumbi subacetatis..... ℥ iij.
Sp. vini methylati..... ℥ j.
Aqua rosæ..... ad ℥ x.
Fiat lotio.

The lotion to dry on, and the hands subsequently to be dusted three times daily with powder composed of equal parts of calamine and starch-powders. The patient should wash the hands always in cold water, and well dry them, and should avoid malt and all fermented liquors, pickles, spices, tea, and coffee (taking cocoa), and be sparing in the use of sugar. The lotion failing, she should wash the hands thrice daily with carbolic acid soap in soft water, in which half a dram of extract of belladonna has been previously dissolved, and take a pill containing valerianate of zinc, two grains; quinine, one and one-half grain; and extract of belladonna, one-fourth grain, with conf. rose q. s., t. d. s. A mixture (if any tingling or burning in the fingers) containing bromide of potassium, digitalis, and a vegetable tonic, will complete the treatment. The belladonna, besides causing vaso-motor paralysis, contracts the unstripped muscular fibres surrounding the arterioles going to supply the sweat-gland, and carbolic acid has a benumbing effect on the nervous filaments supplying these and the papillæ of the skin proper.

A NEW HOSPITAL AT CHICAGO is to be built by the Rush Medical College.

THE POSITION OF THE AMERICAN MEDICAL ASSOCIATION.—We cannot refrain from penning our dissent to the decision of the American Medical Association refusing to take any steps looking toward a revision of the existing Code of Ethics of that body. The petition of the St. Louis Medical Society was eminently proper, and we believe should have been adopted; but instead of being allowed discussion, it was promptly tabled, although by not a very heavy majority. We believe we voice the sentiments of a full majority of the reputable, regular profession in this country to-day, in saying that the Code of Ethics can and ought to be so revised as to be made a living law instead of the dead letter it now is. Many who talk the loudest in its favor are the most flagrant offenders against its spirit; such will always vote against a revision, for in its stilted language and antiquated and sometimes ambiguous construction they can always be able to escape the penalty of its violation, and to themselves, at least, excuse their wrong-doing.—*Peoria Medical Monthly.*

THE RECENT MEETING OF THE AMERICAN MEDICAL ASSOCIATION at Cleveland, while generally profitable to those in attendance, was not without its disagreeable features, and it is with the hope that they may be avoided in the future that we call attention to some of them now. It certainly is not expecting too much of the Committee of Arrangements that they should see to it that delegates are at least provided with suitable lodgings. This was not done at Cleveland, so we are informed, but many, left to shift for themselves, experienced great difficulty in finding accommodations, and then, in the matter of registration, delegates were kept waiting, closely packed, for hours for an opportunity to sign their names, when provision should have been made by which it could have been done in much less time. There was difficulty also in obtaining information as to the departure of trains and in securing tickets, and the situation was truthfully described by one agent, who said, "I have had experience with a good many conventions, but I have never yet seen one where there has been such poor management as at this." Now the fault lies entirely with the Committee of Arrangements. This committee, we are told, was not at all harmonious in its workings, but was divided by differences of opinion which, in one instance, led to a personal encounter between two of its members, and so, from lack of harmony among themselves, the association was made to suffer. It seems that the committee, either willingly or unwillingly, surrendered to the *ipse dixit* of one of their number, and that he, swelled out of all proportion with a false estimate of his own wisdom and importance, undertook the management of everything, and, as might be expected, many things were left undone which would have added to the comfort and pleasure of the delegates.—*Weekly Medical Review.*

PLASTER-OF-PARIS PESSARIES.—Dr. B. F. Dawson states that he has made use of plaster-of-Paris, moulded within the vagina, with the most decided success, in two cases of displacement of the uterus (*New York Medical Journal*). The first case was that of a woman suffering from anteversion and a very aggravated prolapse of the left ovary. She was placed in the knee-chest posture, and pledgets of absorbent cotton, each with a string attached, soaked in a mixture of plaster-of-Paris and water of about the consistence of gum, and partially squeezed out, were placed in the posterior fornix of the vagina and around the vaginal portion of the cervix, and held in position. The vagina was then cleaned out, in a few moments the cast had hardened, and the patient went away with instructions to withdraw the instrument should it cause pain. When she came back at the end of three days she said she had experienced great relief. On removing the plaster pessary, the mucous membrane with which it had come in contact, instead of being irritated, as one might have expected, was found to have been benefited by its presence; it was firmer and less irritable

than before, and the prolapsed ovary had evidently been sustained. The second case was one of retroflexion, in which the pessary acted not only as a harmless agent, but seemed to give all the uterine support desired. The instruments were removed, placed in fire to burn out the cotton, and dipped into wax or paraffin for the purpose of making them impervious to the secretions and to render them more durable. This method of supporting the uterus commended itself for the facility with which it could be applied, for cheapness and accuracy of adaptation.

ST. LOUIS MEDICAL SOCIETY AND THE CODE.—On June 23, 1883, Dr. Atwood introduced the following, which was adopted by the St. Louis Medical Society, after some considerable discussion :

"*Whereas*, At the recent session of the American Medical Association, a preamble and resolution were offered for the consideration of said Association, purporting to represent the sense of the St. Louis Medical Society upon the propriety of preparing a new code of ethics, or altering and changing the existing code in accordance with the present relations of the profession, and

"*Whereas*, In said preamble the assertion is made that 'the Code has accomplished all it was designed it should, but at present many of its features are obsolete and not adapted to our wants. The necessity of an early revision is very apparent, is loudly called for in all parts of our land, and cannot be repressed much longer. . . . The time has come when the loud and very soon universal call will have to be heeded ;' and

"*Whereas*, The St. Louis Medical Society did not instruct, 'That the Committee be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884 ;' therefore,

"*Resolved*, That the St. Louis Medical Society distinctly repudiates the statements contained in said preamble, and again expresses its fealty to the existing code of ethics as a time-honored and most suitable fundamental law of the profession, and specially deprecates any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity from the machinations of schismatics within or enemies without.—A. H. OHMANN-DUMESNIL, M.D., Rec. Sec."

CONCERNING THE TWO BUSHELS OF TONSILS AND OTHER MATTERS.—Dr. J. S. Thompson, of Indianapolis, Ind., writes : "In your journal, dated July 28th, Dr. W. N. Williams of this city indulges in some facetious and would-be learned remarks at my expense, and quotes 'Ray's Practical Arithmetic' to show how many tonsils it takes to make a bushel. It will be remembered that in the discussion of Dr. Jarvis's paper on 'Tonsillotomy without Hemorrhage,' I remarked that I believed that I had removed two bushels of tonsils and no hemorrhage followed, and that I considered the instrument of no use whatever except in cases of purpura hemorrhagica, or similar rare ones. Did any one present suppose for one moment that I had measured them? Had I been the essayist, of course I should have been more exact; but it was an off-hand remark, intended simply to show that in a great number of cases, in a twenty-three years' practice, no case called for any other instrument than a chisel-shaped guillotine, the inventor and maker of which have long since been in their graves. Now, let me say a few words concerning new instruments and modifications of old ones. Is it not natural that when one invents one of these, he very soon finds more cases on which to use it than do others? Look, for instance, at the multiplication of ophthalmoscopes during the last twelve years! Why, one cannot go to London or other cities without finding inventors' names given to them that one never even heard of before. And so is it in modifications of operations, some one's name must constantly be associated with this or that incision or mode of procedure, when its importance is insignificant beyond measure. For my part, I expect to go on excising 'scirrhous' and other forms of tonsils to the end of my days without the slightest hesitation whatever ; and I have not the least doubt that when the reports are all in it will be found that as many deaths from hemorrhage follow the extraction of a tooth as the excision of a tonsil."

HOW TO SLEEP ON A TRAIN.—Dr. Henry R. Stout of Jacksonville, Fla., writes: "In THE MEDICAL RECORD for August 4th, in the article, 'How to Sleep on a Railroad Train,' is it not a mistake to place the person with the *feet* toward the engine? I have tried both ways, and have found, and have advised others with equal success, that to sleep with the *head toward* the engine would insure sleep. The rapid forward movement of the train forces the blood to the extremity furthest from the engine. It is possible that this position causes a more rapid return of blood to the heart, but it is hardly reasonable, I think, that it would cause a hyperæmic condition of the brain."

A USEFUL SUGGESTION REGARDING CATHETERS.—Dr. Hüpeden calls attention to the danger of infection attending the use of catheters as at present constructed. The defective and dangerous portion of the instrument is the blind end beyond the eyes. The most careful cleansing may fail to destroy or remove all infectious matter from this part, and thus some disease may be communicated to the next patient upon whom the instrument is passed. To obviate any such risk it is only necessary to fill up with some solid material this blind extremity.—*Centralblatt für Chirurgie*, July 7, 1883.

THE PREVENTION OF BED-SORES IN NERVOUS DISEASES.—Dr. Thomas Browne, of the Royal Navy Hospital, Great Yarmouth, asserts that bed-sores can be prevented even in the worst forms of general paralysis. Dr. Browne offers no specific, but states that very careful nursing, frequent washing, change of clothes, the use of pads, water-beds, and special attention to diet are the measures to be employed. Bed-sores, he says, no longer occur in the Naval Hospital at Yarmouth.—*Nashville Med. Journ.*, June, 1883.

CONCERNING THE INOCULATION OF LYMPHATICS AND BLOOD CAPILLARIES.—Dr. Theobald Smith, of the Anatomical Laboratory of Cornell University of New York, writes : "In THE MEDICAL RECORD of June 16, 1883, an abstract is given of a communication to the Académie des Sciences of Paris, in which Dr. Guérin, supported by experimental evidence, maintains the inosculation of lymphatic and blood capillaries. The abstract is prefaced by the remark that Mascagni and Sappey also hold this view. Lately my attention was called to the *Comptes Rendus* of June 11, 1883, which includes a memoir by Sappey on this same subject, in which he, however, gives up his former position. A unique method of demonstrating and studying both the lymph and the blood channels in the same microscopic field—the latter fading away as the former come into view—led him to abandon the theory of inosculation. He says : 'Sustained by these new and precise facts, and no longer by simple induction, I conclude that there is no room for admitting this communication ; the lymphatic vessels at their origin are everywhere hermetically closed.' Curiously enough, the prominent English journal of science, *Nature*, for June 28th, p. 215, incorrectly reports Sappey as having demonstrated by actual observation 'the intimate union of the radicules with the blood-vessels which had long been assumed on general grounds.' "

CARRYING THE CLINICAL THERMOMETER IN THE PANTALOONS POCKET.—Dr. D. S. Clark, of Rockford, Ill., writes : "The most convenient way to guard a clinical thermometer against accident that I have ever tried or heard of is simply to carry it in the pantaloons pocket, just as a knife is carried. I usually devote the left-hand pocket to this sole purpose. Let any physician try this plan and he will prefer it to every other. Now will physicians inform us as to the best method of keeping hypodermic syringes in working order?"

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 8 NEW YORK, AUGUST 25, 1883 Whole No. 668

Original Articles.

ROUND SHOULDERS, OR ANTERO-POSTERIOR CURVATURE OF THE SPINE.

BY CHAS. F. STILLMAN, M.S., M.D.,
NEW YORK.

"ROUND shoulders" is one of the most prevalent deformities, and yet very little attention is paid by surgeons to its treatment, although it is amenable to curative measures with as little discomfort as any other prominent deformity.

An inquiry into its anatomical and physiological characteristics affords a clue to the treatment, that being the portion of the subject which more directly concerns us in this paper.

The spine, viewing it from the side, is a column composed of twenty-four segments, upon which rests the head, and to this column in its dorsal region is also attached the thorax, and secondarily the upper extremities. The normal line of the spine is a compound curve, and it is retained in this shape by muscles disposed along its course, acting as do the stays to a mast, and opposing the effect of the weight of the head as a constant gravital force to increase the curves. When the normal degree of tonicity does not exist in these muscles, this increase in the curves is found and is further exaggerated in the region of the neck and shoulders by the tendency of the upper extremities and thorax forward, and by this forward tendency we obtain the contracted chest, the separated and protruded shoulder-blades, and the bent and stooping shoulders, all characteristic of the deformity in this region.

But as the line of direction must be maintained, when the head drops forward the lower part of the trunk also projects itself, giving rise to the appearance of flat nates, and causing it to appear as if the dorsal region projected very much backward beyond the normal line, as in Fig. 1.

The most common cause to which this deformity can be ascribed is muscular weakness, the inability of the back to recover the erect position after it has been relaxed. Relaxation of the back is the position of rest assumed by the trunk when the superincumbent weight is to be more fully borne upon the bodies of the vertebræ, and we then rely upon the ligamentous bands and attachments rather than muscular force to keep the body in this less fatiguing position; thus relieving the muscles from all necessity of the contraction which is required if the trunk be maintained erectly. In this position of rest the spine curves backward in the shape of a bow, from the sacrum to the head, the centre of the bow being in the middle dorsal region, the bodies of the vertebræ being crowded together throughout the whole extent of the spine (see Fig. 3), and the muscles not exerting their contractile force.

When the erect position is again assumed, the muscles should restore the normal spinal curves so that the head and upper portion of the trunk, with their appendages, become supported in the proper line of direction (Fig. 2).

But if the muscles lack tone or are fatigued, or the patient is indolent, the position of rest becomes habitual and we have the production of round shoulders as the result.

There are various degrees and forms of the deformity, dependent upon the age of the patient, the length of the spine, the regional muscular development, the sitting habits, etc.; but these are sufficiently known to every practitioner not to require description here. The projection forward of the head and nates is not found to the same extent in every case, but seems to be compensatory—to permit the line of direction to be passed somewhat anteriorly to its normal position, in order that the body may be properly balanced while in the vertical position.

The *treatment* which concerns us most directly in this paper, may be considered under two heads—*mechanical* and *physical*.

The *mechanical treatment* consists in the use of properly devised apparatus for the restoration and retention of the normal curvature, and the mechanical problem this involves resolves itself into the reduction of the dorsal curve, since the cervical and lumbar are merely compensatory and will tend to regulate themselves.

We have already noted the fact that the exaggeration

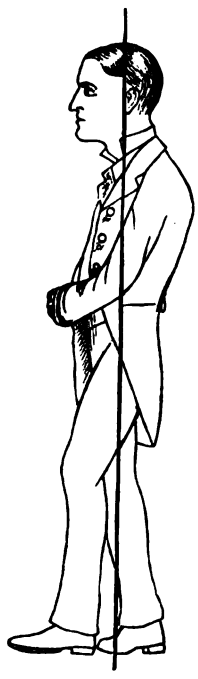

Fig. 1.

Fig 2.

of the curves of the spine produces undue pressure upon the bodies of the vertebræ in the dorsal region, and we must, therefore, turn our attention first to placing the spine in such position as will tend to separate the bodies and transfer pressure to the other surfaces of contact in the normal degree. To effect this we utilize the principle of gravity as an extending force. When the patient assumes the horizontal position upon a table so arranged as to have its padded edge under the shoulder-blades, as in Fig. 3, and then allows the head and upper extremity to gradually fall backward and downward, we have produced a series of curvatures exactly opposed to those exhibited by the round shoulders. You will observe, as the patient's head and shoulders descend, a gradual obliteration of the condition of round shoulders and a reproduction of the normal curves of the spine. The bodies of the vertebræ become freed from the crowding to which they have been subjected, and a physiological and true extension of the parts is effected—

the traction-force being the superincumbent weight, the cervical spine being placed in a state of extension by the weight of the head, and the dorsal spine in extension by the weight of the head, the neck, and the upper extremities. This combined weight, augmented by gravity, is simply tremendous as a traction or tractive force, and produces a true backward physiological *extension*. Do not confuse the words traction and extension, or substitute one for the other. Traction is the force which produces extension. The former is a cause, the latter an effect; the former is an active agent, the latter is a condition; or in other words, extension is a result of traction, and is the effect produced upon a joint by traction. The words are not synonymous, and should not be so employed. This principle of backward traction, by the weight of the upper extremities, is one which we have been utilizing lately, as a most satisfactory factor for the production of extension in Pott's disease, as we not only obtain as

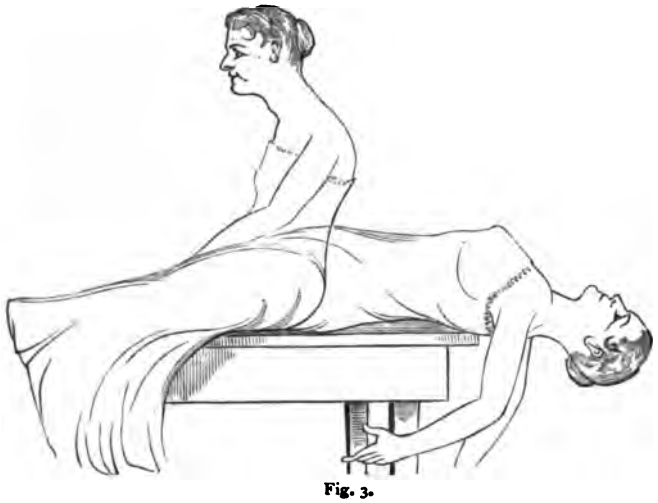

Fig. 3.

much extension of the spine as we can by suspension (or traction by the lower extremity), but we obtain this in a backward direction, which enables us to apply leverage to obliterate the deformity to a more satisfactory extent than ever before, and with less discomfort to our patients.

We have now, by the use of the table, obtained great improvement in the condition of the deformity, and the question arises, how are we to retain this improvement when the vertical position is again assumed, as the posterior spinal muscles are impaired and have not sufficient power to hold the spine in its restored curves.

Although in slight or recent cases this can be accomplished by simple methods, yet a brace will often be a necessity in severe cases, and it is easy for us to construct one upon the principles which govern the reduction of the deformity.

We must strive to keep the patient in a state of hyper-erectness until the muscles have contracted and been exercised and invigorated sufficiently to render the use of a brace unnecessary, and if we glance at Fig. 3, and turn it in such manner that the supine figure will appear vertical, it will be seen that the figure is more erect than normal, *i.e.*, hyper-erect, and this position (of the dorsal, not the cervical spine) is necessary to the development of the impaired muscles as well as for its effects upon the spine itself.

Now, how to keep this position with a brace. It may be, to some extent, done with a strong back-frame, fashioned to the hyper-erect shape and put in position and secured while the patient lies upon the table in the extension position. This frame may be made of some metal which can be bent by the hands of the surgeon, but it must necessarily be made of such heavy material as to be too cumbersome for general use, for it must be sufficiently firm to withstand the tendencies of the deformity, as it matches strength of material against the tendency of the superincumbent weight to fall forward.

I must impress upon you the importance of having this frame fashioned to the hyper-erect shape, for if so made, and well secured to the body, the forward tendency of the body and the exaggeration of the dorsal curve are to some extent prevented by the strength of material and shape of the splint.

A second and much more satisfactory method of utilizing the backward traction in the formation of a brace is one constructed on my adjustable lever plan—the *fulcrum*, F, to be over the sacrum—the *resistance*, R, to be greatest just below the central region of the dorsal curve, and distributed all along the spine below this region, and the *power*, P, to be the forward tendencies of the upper extremities and head (Fig. 4), so that while the body is maintained erectly no force is exerted upon the spine at any point; but the least tendency to rounding the shoulders brings a power to bear exactly opposed to the power of the deformity, which increases automatically in proportion to the extent of the deformative force.

To construct a brace so as to bring the force to bear under these conditions we place a girth, provided with a sacral projection, about the hips (Fig. 5). From the upper edge of this hip-girth springs a pair of padded strips, one on each side of the median line, so as to avoid the spinous processes, and these strips extend upward to the middle dorsal region (Fig. 5). So far the brace is a substitute for the table, but to give it efficacy we must supply a frame for backward traction as a substitute for the backward force exerted by the weight of the upper extremities when the body is in the traction position (see

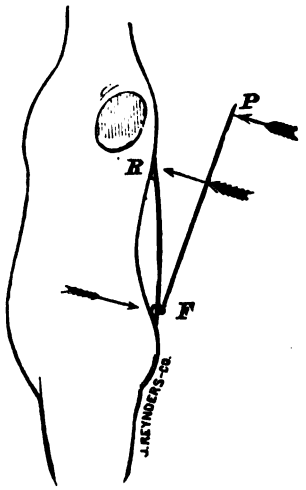

Fig. 4.

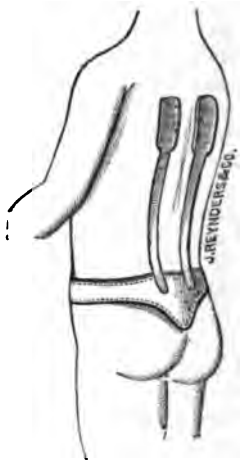

Fig. 5.

Fig. 3). To effect this, a light steel frame moulded to the shape of the back and extending from the sacrum to the cervical vertebræ is attached at its lower extremity to the hip-girth (as in Fig. 6) and there provided with a ratchet which admits of its being secured at any angle. The upper extremity of this frame is secured to the body by means of chest and shoulder-bands (Fig. 7), which buckle in front to a firm leather chest-*plate*, the use of which permits us to avoid the constriction and discomfort attending the use of bands passing around the chest without such intervention.

The action of the brace (Fig. 7) is, as you see, that of a lever, exerting its force in such a manner as to distribute its pressure along the spine and not at any one point; the dorsal centre being the point of greatest pressure, and the sacrum the least, the intermediate pressure being so graduated as to decrease from the dorsal centre to the sacrum. We thus see that direct pressure is provided to the greatest degree where it is needed most, *i.e.*, at the dorsal centre, and in the least degree where it is needed the least, over the sacrum; and there is thus no portion of the spine below the dorsal centre without direct support. This support and forward pressure is just in proportion to the backward angle

of the brace-frame and the forward tendencies of the deformity. In the beginning of the treatment this brace-frame may be secured at a considerable angle (Fig. 6), but as improvement ensues this may be lessened, until it lies flat upon the padded strips (Fig. 7) and becomes in its action a mere spinal support instead of a lever.

This brace makes an extremely effective and comfortable instrument, and can be made to exercise any desired degree of power on the deformity. But there are many cases which do not require so pronounced an instrument as this—cases in which the youth and immaturity of the patient have not as yet allowed the parts to become perpetuated in the abnormal curves to such an extent as to demand its use.

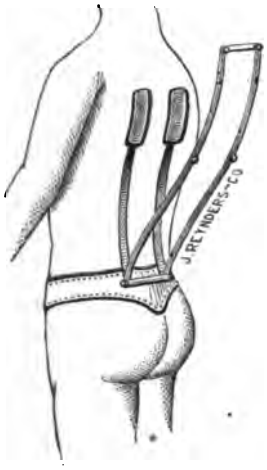

Fig. 6.

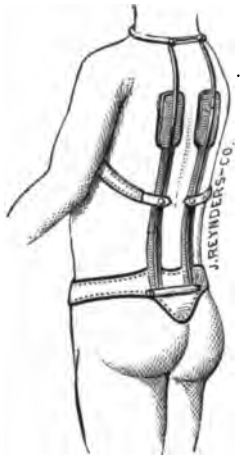

Fig. 7.

Such cases require merely a light, strong, compound spring, or pair of springs, which will act supplementary to the impaired muscles of the back, and if we can adapt this spring power to the form so that it will not be apparent to an observer that the patient is wearing an aid of this kind, so much more successful will we be in our practice. We must remember that this class of deformities is unattended by pain, and it is therefore desire for symmetry which brings them to you; so that if an unwieldy spring makes a protrusion along the course of the spine it would be an objection to treatment in the eyes of the patient. But it is possible, by incorporating into an ordinary well-fitting corset, a *pair* of compound springs, one on either side of the median line, to provide against the objection which attends the use of a single spring. The under springs are somewhat longer than the corset and are provided with pads at their extremities so as to allow sufficient grasp of surface to prevent the edges of the pads from digging into the flesh when the body is laced down to the springs (see Fig. 8). The upper springs extend to the neck and are connected to the chest-plate in front as in the lever brace. The only springs which we have used heretofore in the profession to combat round shoulders have been fashioned in an exaggeration of the normal curves of the spine—a shape which would tend to increase and intensify the abnormal curves which are symptomatic of the deformity.

Fig. 8.

To make round-shoulder springs effective, however, the curves of the under spring should be the reverse of the curves of the deformity—opposing apex to apex. Thus the curve of the deformity and the curve of the combating spring should be so placed in contact with each other that when the centres are together and the curves drawn tightly toward each other there will be reduction in exaggerated curves of the spine as well as the curves of the spring.

The curve of the back springs are opposed to the curves of the back (see Fig. 9) before the stays are brought together, but when the corset is tightened and secured to the figure (Fig. 10), its action is to flatten the dorsal curve in direct proportion to the strength of the springs.

For males, corsets are not so applicable for obvious reasons, and we therefore provide the springs with girths in such a manner as to be as effective for the purpose intended. So much for the mechanical treatment.

The *physical* treatment next engages our attention, and by this we mean the employment of such exercises and movements during the mechanical treatment as will conduce to the permanent cure of the deformity after the braces and corsets are thrown aside.

It is necessary in the first place to have a table, although a lounge or couch could be made to answer, the surface of which is padded or so covered as to be comfortable to the patient. This table should be a low one, so as to divest the patient of all fears of falling while undergoing treatment, and on such a table when the patient places himself there in the extension position—the edge of the table coming to the central dorsal region and the head and upper extremities hanging over—you will see that the chest has partially resumed its normal shape, that it has lost its contracted look, and that the shoulder-blades tend to approach each other. To approximate these it is necessary to clasp the hands together behind and under him—and at first this is almost an impossibility. When undergoing this process it would appear as if the skin and tissues of the anterior of the thorax were stretched as much as their structure would allow, and that posteriorly the soft parts were redundant.

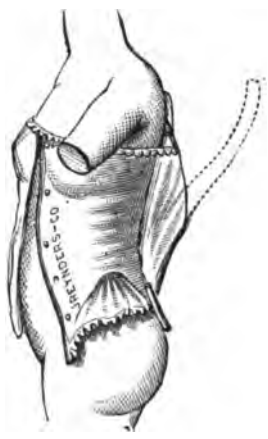

Fig. 9.

Fig. 10.

Dumb-bells of various weights are now taken in the hands and a series of rapid lateral movements practised which still further expand the chest. There are also quite a number of calisthenic exercises which are of advantage if practised in the backward traction position, but they must be employed with care and moderation, as their expanding effects are so powerfully augmented by gravity that they may strain the tissues painfully and thus delay treatment. A most useful agent is also found in the rubber-cord. Of these there should be two, fastened by detached hooks and staples to the floor in such a manner as to draw the hands beyond each other, the resistance of the muscles to the contractility of the rubber constituting a most valuable agent for developing the chest if formulated into a series of exercises.

This backward traction position may seem harsh exercise to be daily indulged in by your patients, but it is the most efficacious plan of physical treatment, and will do the most good in the shortest time. There are, however, many lighter forms of exercise which may be utilized.

One which can be specially recommended for other than the backward traction position is one in which the

chest is expanded by the body falling forward as much as the rubber cords grasped by the hands will allow, the feet not being moved and the head prevented from falling forward with the rest of the body (and thus the hyper-erect position maintained) by means of a wooden bar placed between the teeth and connected to a gymnastic frame by cord or wire. This is very serviceable also, in strengthening the muscles of the neck.

There are also certain postures which are of themselves beneficial, and should be recommended to your patients for their adoption.

The *first* is in regard to sleeping. Have both bolster and pillow removed from their usual place under the head, and have one or both placed under the shoulder-blades. This brings the head a little below the level of the dorsal region and curves the spine in direct reversal to the curves of the round shoulders; and as, during sleep, relaxation of the spine ensues, the posterior spinal muscles are permitted to recover some of the contractility they lose during the day if proper supports be not worn.

The *second* is that of reclining (not upon the back but upon the front of the body) during the day for reading or resting, the patient lying at full length and resting on the elbows. This is a favorite position with children and should be encouraged, as, if steadily practised, it is a sure preventive of the deformity But many parents, instead of encouraging this trait, rebuke their children for it, and sharply order them to get up from the floor. If they could only be made to understand that it is one of the greatest helps to symmetrical development they would be more inclined to encourage its practice.

THE UNITED STATES MEDICAL SERVICE.

By CAPTAIN R. W. SHUFELDT,
MEDICAL CORPS, U. S. ARMY.

When I speak of the United States Medical Service it is to be understood that the Medical Corps of the Army and Navy alone are referred to, the writer having little personal knowledge of the organization and government of the United States Hospital Marine, so that it would be through chance only that if anything we have to say here is found in the sequel to apply with equal force and pertinency to them.

With the Army and Navy of course it is different; the medical staff of the former being known to me as one of its members, and one who has performed the majority of such duties as are met with during the first seven years' service, and the schedule which forms the complete list is by no means as brief and simple in character as one might imagine. Connections of another nature have allowed me the opportunity to meet, and in many instances form lasting friendships with members of the medical staff of the Navy, and from the first impressions made on my youthful mind, while serving in the capacity of a young warrant officer aboard a man-of-war, during the year of 1864, by the surgeons of the fleet, memorably by Dr. Cassin, nephew of Cassin the naturalist, till such days of later years as those passed under Dr. Wales' personal tuition and guidance, to my present commission, have been of the happiest nature. So that, through this and other means, some opportunity has been afforded me of learning something of this service likewise.

Some of the questions I wish to call to the attention of the profession, and touch upon as best I may in an article that must necessarily be as brief as this one, were presented to my mind by an editorial that appeared in the *Philadelphia Medical Times* of May 7, 1881, entitled, "The United States Naval Medical Service," and several kindred articles that have appeared here, there, and elsewhere since. As the subjects to be discussed will be taken up in the order as they appeared in this editorial, it will be necessary for a clear understanding of the questions presented to quote here the entire first two paragraphs of the remarks made by the editor of the *Medical Times*, leaving his two remaining columns to be handled in another way. He says: "It is probable that there is no medical government service in the world, the requirements for admission to which are more severe than is the ordeal through which the medical candidate for naval honors must pass in this country. We are credibly informed that twelve aspirants have been before the examining board now in session without one having succeeded. So far as a good deal of experience teaches us, we should say that the standard is even higher for the Navy than it is for the Army. Most of our readers will no doubt agree with us, however, that when once in the Navy a physician almost always disappears entirely from public sight, whereas in the Army not rarely he rises to a first rank among scientists. The doings of the medical staff of the Navy, what *are* they? A few reports lying upon book-shelves—pitiful pamphlets alongside the invaluable tomes that have come from the Surgeon-General's office at Washington. Not only is this true of medical works proper, but also of scientific publications other than medical. Where is the Dr. Coues of the Navy? Yet the abundant leisure, the months of floating in the tropics, the wide travel, afford both stimulant and opportunity for natural history research."

The fact that the editor of the *Medical Times* holds the opinion that the standard for entrance in the medical corps of the Navy is higher than it is in the Army, does not surprise me in the least. Nor is he to blame, for it is a very general, and I may say, an entirely erroneous one. It no doubt has arisen from the fact that the examination in the Navy is so arranged that it extends by custom or law through a full week, whereas in the Army a candidate may complete his examination successfully in from three to five days, depending altogether on how long it takes the board to satisfy themselves as to his fitness. The not unusual circumstance, the *Times* brings forward, of twelve young men failing before the Navy board, and still no successful candidate, is by no means a criterion, for instances have occurred in the Army where the sequence ran in between the thirties and forties before a successful candidate was found, and it stands to reason that if three medical gentlemen composing an examining board cannot ascertain the calibre of a man in from three to five days, they certainly will not do it in seven, or a month either as for that matter. Opportunity was afforded me, when I first entered the corps, for comparing the questions asked in examination for entrance to both services, and the impression was made upon me then that there was little or really no difference in their general character. In the Army the board is guided somewhat by the contents of the autobiographical letter that the candidate is obliged to write the first day of his examination, wherein he states what his general course of study has been up to the time of his appearance before the board. As an instance, in my own case, on my entrance examination I was requested by the board to submit to them for inspection specimens of skins of birds and mammals that formed a part of a collection I had made as a young man; they asked to see, likewise, colored drawings I had made of the same, as well as a set of marine charts that I had drawn to obtain an appointment as draughtsman in the United States Naval Hydrographic Office a year or two before. As the charts had passed me, and the specimens of birds had also been pronounced favorably upon by Professor Albert S. Bickmore, who was then in charge of the Museum at Central Park, New York, and had given me the appointment as naturalist to one of the Arctic expeditions then forming, I complied with the request of the board with more confidence than I might have under other circumstances. It would have been difficult, too, to have found expression for my delight in finding upon the very threshold of my new career such positive evidence that such pursuits were encouraged in the medical service of the Army.

Once in the corps of either service, after a certain length of time an officer is expected to pass a second examination before the examining board, the object ostensibly being to ascertain whether the officer is qualified for promotion or not. In former times in the Navy this examination was competitive and an officer could gain rank by it, but I believe such a pernicious feature as that must have been has now been done away with, though exactly how it is managed in these days I am not informed, but not long ago a surgeon of the Navy told me that under no circumstances did it threaten an officer's commission in any way.

In the Army this second examination is arranged on a widely different plan. Substantially the law says that after the first five years of an army medical officer's service, or what amounts to the same thing, after he has passed into the grade of captain, which he does by act of Congress at this time, he is liable to be called upon at any time to appear before the regular examining board to be examined as to his fitness for promotion. Should he be found in any way deficient a second trial is given him, after the expiration of a year; failing again, his resignation is requested.

When one comes to think of the effect that such a specification as this would have upon the mind of one engaged in the study of medicine, and the vast field of research that that means in our day, he will be struck at once by the fact that it affords drawbacks far more harmful in its ultimate effects than even the old competitive examination of the Navy. Speaking from my own personal experience with this second examination, I can say that during my first five years the impression had been made upon me, through conversation with many older medical officers, all of whom, as far as known to me, had been successful at this trial, that it was a matter of not much consequence, did not last long, and really was sort of a form to examine more into the question as to whether or no an officer had proved himself *generally fitted* for the service; an examination of his record. Many others held another view—showing that minds were divided on the question of its utility—that may be summed up in the expression given to it by one of the number, that "it was a sieve to catch the bad rats," just as if medical officers were not amenable to trial by courts martial as any other staff officer for violations of the regulations of the service; or that a thing should exist that in its workings was harmful to the many while it acted with doubtful certainty in eliminating the few objectionable ones. Moreover, it is not believed that the Government ever intended to place such a power as this in the hands of a board composed of members of the same corps; still one's mind is harassed with the doubt if its object be to take a second look at an officer's attainments, when he sees medical gentlemen holding contract as acting-assistant surgeons at military posts appear before the board for examination for commission, be unfortunate in the attempt, yet return to their duties at military stations with the same responsibilities. This is not said as bearing at all upon the efficiency or non-efficiency of the gentlemen as a whole, for the writer holds many of them among his best tried friends, and in not a few instances members could be chosen from among their number that would be of the highest honor for any medical corps in the world to claim them as its own.

My mind had been lulled to a certain degree of security by what has already been cited above, in fact I was upon scientific duty in the Army Medical Museum at Washington, when the summons to this second ordeal reached me. I had made no *special* preparation whatever, so after a brief but exciting struggle of three hours failed. Comfort was dealt out to me that far abler men than myself had met the same fate and that it formed one of the episodes in the early life of Dr. Flint, of New York. It hardly seemed that this latter fact was anything to boast of, or proved the efficiency of the scheme to fulfil its purpose, if it had any. Before leaving New York, where the board held its sessions, I met eight or ten medical officers of about my own date of entry into the service, who were there on the same mission as myself. Some of these gentlemen had passed, others had not been quite so fortunate, and still others had not yet been before the board and had been "cramming" there for three or four months. Naturally when we met the subject of the conversation turned upon the examination, and to make the matter brief, the unanimous verdict was that its effect was a *bad one;* that these effects may be prolonged over a period of from ten to fifteen years, as the law does not specify that one shall make his appearance positively at the end of the first five. A number of such instances are on record. The writer was doubly impressed with all the discussions that took place at these meetings, because he had just failed himself and now stood with the additional responsibility of a young family about him, with the fact staring him in the face that at the end of another year, should the same result follow, he would be asked to resign. Let us devote just a few words, however, to the chief drawback caused by this examination, and in fact the only one that interests the Government, whose aim it is to keep an efficient medical staff of the Army.

A young man is found qualified and enters the medical corps. As the preparation for his entrance examination has no doubt been trying, the first impulse after becoming accustomed to the novelty of freedom he at first experiences is to rest for a month or so; then follows a reading of the journals so generously furnished by the Surgeon-General's office; then a taking up again of his old text-books as cases commence to present themselves. Six or eight months glide by, when a never-out-of-the-mind fact, his second examination, commences to operate. In the mean time, no doubt, he has, as all professional men do, made a choice in the favor of some special subject or branch of his profession or undertaken some original line of research—perhaps because a uniform can never change the bent of a man's mind or human nature, however tightly it may be buttoned around him, as the history of numberless cases will vouch for. He may be in the very act of cutting a section for microscopical work, when it suddenly dawns upon his mind that very soon he is to be examined and the board may not touch upon this subject at all. This thought is followed by another, that he perhaps, if then called upon, could not give a very lucid explanation of the "cause of pitch of musical sounds." He rushes to his works on physics; this subject barely opened when the first one comes up again, and the board may not care about the "pitch of musical sounds," but about the "date and incidents of the battle of Crecy," then the long vista of history is almost hopelessly scanned; but the board may not question him in history, although it is their prerogative to do so. At the end of an hour or so we find him leaning back in his chair, almost helplessly gazing at the four or five long rows of books before him, in a condition of mind totally unfitted for study, his tissue dried up on the slide, and the scalpel on the floor, or else he wanders out, and unless of cast-iron nerve, seeks other means, not professional, to drive this bugbear away, even for only a brief space of time, and yet this education of his mind may be kept up for years—receiving a *sudden* shock every now and then when he learns that some officer of undoubted ability has failed. Can any one devise a more perfect break to professional progress and excellence than this? anything more vicious in its operations, more certain to produce an irritability of mind and temper, a ranker poison to the hopes of a well-balanced education? Let any one—I care not who he is, or what position he holds—know positively and without reserve that at the end of some indefinite time he is to be examined, and perhaps his livelihood placed at stake, upon all branches of his many-faced profession and numerous not exactly specified collateral subjects, and he may be able to have some faint taste of the effect, but hardly appreciate it.

About a year ago, Surgeon J. H. Bill, U. S. Army, an earnest and able chemist, who for a long time was a member of the Army Medical Examining Board, published an article in THE RECORD,[1] which shows better the utter hopelessness of the situation, far better than anything that could ever come from my pen, or that I would ever hope to attempt. Dr. Bill presents his readers in this article with between twenty or twenty-five of the easiest questions his mind could suggest, and such as were propounded to candidates before the board, and as they are to illustrate a certain subject, they are all either physical or chemical. Now, easy though they be, and that depends much upon how the reader takes them, I will guarantee to make out *five thousand* such lists, containing an equal number of questions, and equally easy upon these subjects alone; not only that, but an equal number for anatomy, physiology, toxicology, hygiene, surgery, practice of medicine, obstetrics, materia medica, science, history, literature, medical jurisprudence, the eye and ear, and some half a dozen or more others. It is thus that doubts and complications arise in the mind of the student exactly where to begin. The beautiful vistas so aptly opened in the remainder of Dr. Bill's admirable article, and the advantages it points out accruing from a course of study in chemistry and physics, are equally applicable to like pursuits in several of the branches I have enumerated above.

Now that the writer has run safely through this hit-or-miss gauntlet, having passed at his second trial, he is free to confess that this second examination is the greatest drawback that the medical officer has to contend with, and it constantly risks injuring many a mind. On general principles, I do not believe in examinations, to any great extent, any way. Of my six years' college course those studies that were not followed by an examination at the end of the term have always been better remembered and of the greatest service to me, and I doubt not but that this has been the experience of others.

Professor Huxley has so much to say upon this subject[2] that is wholesome, pertinent to the question, and bears upon what we will have to say in a moment, that I will take the liberty of quoting quite extensively from him. He remarks that: "Examination, thorough, searching examination, is an indispensable accompaniment of teaching; but I am almost inclined to commit myself to the very heterodox proposition that it is a necessary evil. I am a very old examiner, having, for some twenty years past been occupied with examinations on a considerable scale of all sorts and conditions of men, and women too; from the boys and girls of elementary schools to the candidates for honors and fellowships in the Universities. I will not say that in this case, as in so many others, the adage, that familiarity breeds contempt, holds good; but my admiration for the existing system of examination and its products does not wax warmer as I see more of it. Examination, like fire, is a good servant, but a bad master. I by no means stand alone in this opinion. Experienced friends of mine do not hesitate to say that students whose career they watch, appear to them to become deteriorated by the constant effort to pass this or that examination, just as we hear of men's brains becoming affected by the daily necessity of catching a train. They work to pass, not to know; and outraged science takes her revenge. They do pass, and they don't know. I have passed sundry examinations in my time, not without credit, and I confess I am ashamed to think how very little real knowledge underlay the torrent of stuff which I was able to pour out on paper. In fact, that which examination, as ordinarily conducted, tests, is simply a man's power of work under stimulus, and his capacity for rapidly and clearly producing that which, for the time, he has got into his mind."

Then after setting forth much more that is true of the question, he concludes with this paragraph:

"No doubt a great deal is to be done by careful selection of examiners, and by the copious introduction of practical work, to remove the evils inseparable from examination; but, under the circumstances, I believe that examination will remain but an imperfect test of knowledge, and a still more imperfect test of capacity, while it tells next to nothing about a man's power as an investigator."

So much for the standards of the examination of the two services, and so much for the examinations themselves.

Turning again to the editorial of the *Medical Times*, we find that the remainder of the article, both such parts of it as we have quoted above and the unquoted portion, essentially calls attention to two things. The first of these is—Why is it that naval medical officers so seldom arrive at any degree of prominence, and of a consequence the naval medical corps is not a celebrated one, and rarely produces large standard works upon scientific and professional subjects; whereas the medical corps of the Army, not rarely has an officer of distinguished scientific or professional ability appear in its ranks, and as of a natural consequence the medical corps of the Army has become famous throughout the world, and the immense number of its publications are ranked as standard and classical works, both in medicine and science? The second question, to which the reader's attention is called, is the cause or especial reason for these things.

The *Times* confines its discussion of the causes for this, in a desultory sort of a way, to the naval side of the question, suggesting two reasons—the first, "that salt air is a veritable lotus-flower, soothing into an irresistible indolence him who breathes its miasm;" the second, the short length of time that the Surgeon-General of the Navy holds his position. Both of these reasons bear with them a great deal that is true.

In the first case it is not so much the soothing influence of the salt air, as it is that "a rolling stone gathers no moss;" the exceedingly cramped space that one has to work in aboard ship, the limited appliances and books, the action of salt water and air in destroying these, more or less motion of the ship at nearly all times, the noise and excitement in port, and all such matters are eminently antagonistic to long and painstaking research, from which alone flow such volumes as the editor of the *Medical Times* so complimentarily alludes to as having been produced by medical officers of the Army. It might be asked, How is it, then, that such explorers as Darwin ("Five Years at Sea in the Beagle"), Wallace and Bickmore ("In the Malay Archipelago"), and numberless others, have produced such beautiful works as the result of their explorations? It must be remembered that these gentlemen start out thoroughly equipped for the work, that the ship is practically given up to their collections, and the books *are written at home during the many years of quiet life that follows.*

With reference to the short term of office of the Surgeon-General of the Navy, as being one of the causes militating against the production of extensive scientific work in the corps, the editor has evidently hit one of the principal nails on the head, and his question—"How long would any business enterprise thrive whose management was changed every year or two?"—is easily answered. We may say here, too, that little risk was attached to his prediction, and it has since proved true, as to what the history of the medical corps of the Navy would do under the wise regime of Dr. Wales. This able thinker and author, at once gathered those about him of his corps, who had shown special aptitude for either medicine or science, upon some occasion or another, and the effect was immediately apparent in the birth of the Naval Medical and Surgical Society of Washington, with its museum and the scientific and professional papers of numerous medical officers, all of which will pass Dr. Wales' detail down into the history of the medical corps of the Navy, as one of the most advanced and highest

[1] A Plea for a More Thorough Study of Chemistry in Medicine and the Arts, by J. H. Bill, M.D., Surgeon U. S. Army. MEDICAL RECORD, vol. 22, No. 7, August 12, 1882, p. 175.

[2] Science and Culture and other Essays, by T. H. Huxley, p. 67. 1882.

of its epochs, and one to which his name will be forever linked.

When the editor of the *Medical Times* asks the question, as he does in the paragraph we have quoted, "Where is the Dr. Coues of the Navy?" it seems to carry with it that such geniuses are the creation of the Army or the Navy, *per se*, whereas such by no means is the case. The Navy has been, so far, unfortunate, notwithstanding the fact that they employ the same means that the Army does, in not having captured such a mind to add lustre and fame to their corps, for it is through the scientific works of such men that any organization becomes famous; or, indeed, known at all. Is it surprising that when we have a board composed of three or four cultured men, sitting almost continuously throughout the year, and in that time examining from one hundred to two hundred young men, graduates of medicine, and often of the highest classical universities in our land; in short, having the pick of the best material of such a vast country as ours, that they should occasionally find a genius in their net? Never lose sight of the fact that Dr. Coues would have been Dr. Coues anyway; that Dr. Billings would have been Dr. Billings anyway, and so on for such lights as our Drs. Woodward, and Otis, and Beaumont; and, undoubtedly, I could have added Dr. Flint, but he slipped through the meshes, though he *has* been Dr. Flint anyway. Such minds are the outcome of our civilization, and they are no more the property of the Army than they are of our noble country at large. All the Army can do —or, perhaps, I had better say the Government—is to see well to it, for the credit of our country, that the soil on which she places such men is adapted to their growth and not to their death; or, what is almost as bad, if not actually worse, where they become distorted and stunted shrubs, of no credit to anybody. That the Government does not always do this Dr. Coues himself will tell you.[1]

It is the bristling front of our entrance examination that guards the portals to our corps, like Leonidas did the Thermopylæan pass, that makes it possible to add such men to our number, and it is a matter in the hands of the Government afterward whether the country gets the greatest amount of good out of them. Remove this safeguard and the countless horde of Persians would in a twinkling annihilate our fame, and our little body of three hundred and a few odd would sink out of sight and be no more heard of than an equal number chosen at large over our vast frontier.

Emerson has shown us, as only he could, how such geniuses are produced;[2] and Huxley clearly defines their rarity when he tells us "but a small percentage of the population is born with that most excellent quality, a desire for excellence, or with special aptitudes of some sort or another. Mr. Galton tells us that not more than one in four thousand may be expected to attain distinction, and not more than one in a million some share of that intensity of instinctive aptitude, that burning thirst for excellence, which is called genius. Now, the most important object of all educational schemes is to catch these exceptional people and turn them to account for the good of society. No man can say where they will crop up; like their opposites, the fools and knaves, they appear sometimes in the palace and sometimes in the hovel; but the great thing to be aimed at—I was almost going to say the most important end of all social arrangements—is to keep these glorious sports of nature from being either corrupted by luxury or starved by poverty, and to put them into the position in which they can do the work for which they are specially fitted. Thus, if a lad in an elementary school showed signs of special capacity I would try to provide him with the means of continuing his education after his daily working life had begun; if, in the evening classes, he developed special capabilities in the direction of science or of drawing, I would try to secure him an apprenticeship to some trade in which those powers would have applicability. Or, if he chose to become a teacher, he should have the chance of so doing. Finally, to the lad of genius, the one in a million, I would make accessible the highest and most complete training the country could afford. Whatever that might cost, depend upon it the investment would be a good one. I weigh my words when I say that if the nation could purchase a potential Watt, or Davy, or Faraday, at the cost of a hundred thousand pounds down, he would be dirt-cheap at the money. It is a mere commonplace and everyday piece of knowledge that what these three men did has produced untold millions of wealth, in the narrowest economical sense of the word."[1]

Quite recently an officer expressed his surprise to me that Dr. Billings ever made the renowned bibliographer that he is. "Why," he said, "when I first knew him he was doing scarcely anything except looking at fungi through a microscope!" "Sir," I could only reply, "your surprise is no greater, probably, than that of many other officers of every branch of the service, who have said of Dr. Coues, in the early days of his scientific work, that 'he was working to the detriment of his profession,' and many other such sentiments, when Dr. Coues today fills with the highest credit the chair of anatomy, the study which is the foundation of all medicine, in a university that nearly every year supplies one or two young officers to the medical corps of the Army and Navy."

For the growth of medicine and science let us do all we can to prevent the rendering axiomatic of Dean Swift's famous phrase, "When a great genius appears in the world the dunces are all in confederacy against him."

It is impossible to tell, from such biological studies as a young man may take up in the early part of his career, where they will land him; and it is more than likely that a great deal of his work will come to be of practical utility—some day. To support this one has to think but for an instant, and the intelligent physician and scientist not at all, what the knowledge of the anatomy of mammals, birds, reptiles, or, in fact, any of the lower orders of vertebrates has done for our science of medicine.

It will be granted that a knowledge of the anatomy of the form operated on is essential before many of those facts could be demonstrated that require such delicate manipulation, and upon which nearly all of our great truths in physiology depend. Let any one take either of those magnificent volumes of Dr. Flint or Dr. Dalton and clip out, with a pair of scissors, all such parts as where a knowledge of the anatomy of the vertebrates is required in some way or another, or where our knowledge of some physiological truth has been obtained through such media, and note the shrinkage. We all know that our *science* of medicine hangs upon the four fundamental branches of anatomy, physiology, chemistry, and physics. Now what would become of this science if the experiment I have just mentioned could be applied to all such literature back to the days of Aristotle? Simply that the science of medicine would travel backward half that distance itself, to put the mildest construction on it.

In conclusion let us wish that during these long days of peace the many changes required in the medical service of the Navy may be brought about, such as the establishment of their actual rank by act of Congress, as it is in the Army, so that a medical officer may command in his own sphere of action, and that the term of surgeon-generalship be made for a longer term of years—for reasons we have already set forth.

It is to hoped, that with us in the Army, the requirements of the first examination be, if anything, made still more rigid, more searching into the moral, mental,

[1] A Criticism, by Dr. Elliott Coues, in the Nuttall Ornithological Bulletin, Cambridge, Mass., vol. viii., July, 1883, page 166, on Contributions to the Anatomy of Birds, by R. W. Shufeldt, M.D. [etc.], author's edition, extracted (in advance) from the Twelfth Annual Report of the late United States Geological and Geographical Survey of the Territories (Hayden's). 8vo, title and pp. 593–806, plates i.–xxiv., many woodcuts in text. Washington: Government Printing Office, October 14, 1882.

[2] Conduct of Life, p. 113 *et seq.*

[1] Science and Culture, p. 90.

and physical attainments and conditions of the candidates presenting themselves; in short, of so severe a nature as to annihilate the second examination, and render the necessity for its very existence useless; that the present retirement bill, or any other act of Congress, will ever operate so as to prevent the Surgeon-General from holding his office for a less period than twelve or fifteen years, and that he will be chosen, as heretofore, for his executive ability or professional and scientific attainments; that encouragement will always be extended to those who have shown special excellence and progress in professional or scientific work. And one other matter which my space has not allowed me to refer to, is that the day is not far distant when we will see a separate, beautiful in point of design, and substantial edifice shielding our many thousand volumes of valuable professional books, our chemical laboratory, and a museum of surgery, medicine, and comparative anatomy, of which Eric Erichsen has said, after he had reviewed it in its present tumble-down building: "Ah! gentlemen, we have nothing like this in England!"

TREATMENT OF TYPHOID FEVER.[1]

By I. P. KLINGENSMITH, M.D.,
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EX-PRESIDENT WESTMORELAND (PA.) COUNTY MEDICAL SOCIETY.

The object of this paper is not to enter into the history, pathology, and etiology of the disease in question, but to bring before the Society a method of managing typhoid fever as employed in my practice during the past two years, and which has yielded most satisfactory results in the cases in which it has been carried out. In order to economize time and bring the subject more fully before you at once, I will proceed to sketch the plan of treatment briefly:

When I find the patient to have typhoid fever, or when his symptoms indicate that the disease is about to develop, I order him to bed and put him on a liquid diet consisting of milk, beef-tea, or animal broths. I then order the following mixture, as recommended by Bartholow:

℞. Tr. iodinii ..... 3 ij.
Acidi carbolici ..... 3 j.
M.

Of this mixture I direct three drops to be given in a wineglassful of iced or cold water, three times daily, after meals, and which is continued until convalescence is well established. As a rule this medicine is well borne by the stomach, and occasions no disgust on the part of the patient. Partly for its favorable influence upon the skin, for the sake of cleanliness, and also the slight influence upon the temperature, the patient is sponged twice daily with equal parts of alcohol and water, or in some cases, where more grateful to him, with tepid water.

When I find the evening temperature to reach 103° F. quinine in large doses is administered, upon a falling temperature. I usually direct at least thirty grains to be given, one-half the quantity at 5 A.M., and remainder if deemed necessary at 5.30 or 6 A.M.

This quantity, as a rule, will lower the temperature from 2.5° to 3.5° for the next forty-eight hours, after which it may be found necessary to repeat the medicine. In a few cases where the temperature has reached 106° F. I have given quinine amounting to fifty and even sixty grains, succeeding most happily in reducing the temperature without any sustenance of injury to the patient.

For the relief of the headache in the early stage of the disease I find the following to answer the indications:

℞. Quiniæ sulph ..... gr. ij.
Ex. belladon ..... gr. ¼
M. et ft. in pilula. Sig.—One pill every three or four hours.

[1] Read before the Westmoreland County (Pa.) Medical Society, May 1, 1883.

Alcohol is not often indicated until after the close of the third week, unless by reason of the habits of certain patients it may be necessary throughout the attack. In the event of heart-failure it must be administered according to the exigencies of the particular case. A majority of patients do well without taking it at all. Should the diarrhœa become excessive I direct a pill as follows:

℞. Argenti nitratis ..... gr. ½.
Pulv. opii ..... gr. j.
M.

To be given every four hours until brought under proper control. On the other hand, should obstinate constipation intervene, I never hesitate to give a dose of calomel, unless there are reasons to suspect serious intestinal lesions, in which event the bowels may be emptied by enemata.

To prevent hypostatic congestion of the lungs, the patient is turned upon his side from time to time. As an invariable rule from the recognition of the disease the patient must maintain the horizontal position until convalescence is well established.

During the sickness the patient should have a competent nurse, whose duty it is to attend to the punctual administration of the medicines and diet. A liquid diet, consisting of milk, beef-tea, or other animal broths, must be given every two or three hours. Perfect quiet must be maintained in the sick room, all visitors being positively excluded. The room should be kept darkened, all pictures and paintings removed from the walls, and the medicines kept out of sight of the patient. Perfect ventilation must be secured. To avoid establishing a focus of contagion, the dejections must be systematically disinfected immediately after being voided.

The total number of cases treated by this plan is fifty-two, with a recovery of all. Of the cases, twenty-eight were severe, the temperature in three reaching 106° F., and in the other twenty-five 103.5° to 104°. In three of the cases a mild attack of rheumatism set in during convalescence. In two cases a severe relapse from indiscretion in diet prolonged the disease. The average duration of the severe cases was about thirty days, and of the milder about twenty-six days.

You will observe that the remedy employed is iodine in combination with carbolic acid, which no doubt prevents the multiplication of germs in the intestines, checks fermentation, and maintains an antiseptic action in the blood. Also the judicious administration of quinine in doses sufficient to control the temperature.

The success attending this plan of treatment in my hands encourages me to continue it further; and, in conclusion, I will say in its behalf that any who may give it a fair trial will be favorably impressed, and feel that they have put a different complexion on the statistics of mortality.

The Sale of Impure Cream of Tartar.—A conviction was recently had in the Court of Special Sessions of this city for a violation of the Food and Drug Adulteration Law of 1881, in the sale of an impure article of cream of tartar. Only a small fine was imposed; but as the cream of tartar had not been sold as a drug but by a grocer in the course of his trade, it was thought of sufficient importance to appeal. This was done, and not long since the conviction was reversed, the Court holding that where the defendant proved that he had bought the cream of tartar sold by him from a dealer in the open market; that before buying it he had inquired for the best article, and had been told by the dealer that what he purchased was the best; that he paid the highest market price for it, and believed that he was purchasing a pure article and the best, and that he sold it believing it was a pure article. Under these circumstances no criminal intent or criminal negligence had been made out and no offence proved.

PEROXIDE OF HYDROGEN IN PURULENT INFLAMMATIONS OF THE EYE.

By Le ROY POPE WALKER, M.D.,

HOUSE SURGEON NEW YORK EYE AND EAR INFIRMARY.

For the introduction of peroxide of hydrogen in ophthalmic practice, we are indebted to Landolt, who, after an extended and careful trial proves it to be of undoubtedly great value.

In a very able paper on the subject (*Archives d' Ophthalmologie*, September and October, 1882) he gives a large amount of highly interesting information concerning the properties of hydrogen peroxide which it would be well for those wishing to try its effects to read.

"Peroxide of hydrogen (H_2O_2) is ordinarily prepared by the action of dilute acids on the peroxides of the alkaline earths. The hydrated peroxide of barium is decomposed by dilute sulphuric acid, so as to form sulphate of barium and peroxide of hydrogen. The solution obtained in this way contains three per cent. of its weight of pure peroxide of hydrogen, and is sufficiently strong for medical purposes. The dilute solution is a clear, colorless, inodorous liquid, with a taste something like that of cress" (*Ophthalmic Review*).

It is said to retain its properties unaltered for years, if kept at a temperature below 70° F. and well protected from light. It should also be well stoppered, as it rapidly deteriorates if exposed to the air. One of the peculiarities of hydrogen peroxide is the readiness with which it yields free oxygen.

Pus is one of the many substances remarkable for the energy with which it causes the liberation of oxygen. Hydrogen peroxide is also a powerful agent in preventing and arresting fermentation. "It is probable that the peroxide of hydrogen when subjected to the catalytic action of bacteria, reacts upon them and renders them inert. Excellent results have been obtained in the treatment of wounds by this substance."

For the eye it has special advantages as an antiseptic; for, unlike many other so-called antiseptics—notably carbolic acid, bichloride of mercury, alcohol, salicylic acid, etc.—it can be used without danger, and of sufficient strength to be effective.

"When the solution is applied to a conjunctiva affected with purulent inflammation, a froth, resulting from its catalysis by the secretion is instantly produced. The inflammatory products are not destroyed by it, but their physical condition is so altered that they are readily removed from the inflamed surface and all septic action arrested, the micro-organisms in the pus being killed by the nascent oxygen. The conjunctiva, examined ten minutes after the application, is found covered with a layer of fibrin which will again catalyse the solution. After two or three applications the exudation is much diminished, and with each repetition the froth becomes less and less until it is hardly formed at all; pathological secretion is then at an end."

The application produces a sensation of pricking and burning, amounting often to severe pain, which, however, soon passes off. It has been found speedily effective in purulent conjunctivitis, in which boracic acid and iodoform had been tried without result.

In cases of corneal ulcer, with purulent infiltration, its action has been surprisingly good. In fact, it has been my experience that it is much more potent in corneal processes than affections of the conjunctiva. Landolt's method of using it is to instil a few drops of the solution into the conjunctival sac two or three times in an hour, at intervals of ten or fifteen minutes, bringing the solution thoroughly into contact with the affected surface.

I have found it fully as effective when used once in two hours, instilling a dozen to fifteen drops at a time, and much less irritating than when used after the manner of Landolt, for it is to a certain extent an irritant, and its too frequent application may prevent the beneficial results which it is desired to obtain. I also take the precaution to thoroughly cleanse the parts with a saturated solution of boracic acid, before again using it, and if this is not sufficient I remove the layer of fibrin with a delicate pair of forceps.

In purulent ophthalmiæ, after an abatement of the secretion, I have found it best to discontinue the use of the hydrogen peroxide, as its action is now nil, and a return to its use should not be made unless there be a return of the purulent secretion.

Landolt has met with very great success with this remedy in the treatment of suppuration of the lachrymal passages, and considers it vastly superior to bichloride of mercury, boracic acid, etc.

The subjoined cases, will, I think, go far to prove the efficacy of peroxide of hydrogen in ulcerative and purulent processes in the eye. A solution was obtained in April, 1883, by Professor H. D. Noyes, and at his suggestion I first tried it in a number of cases in his service. Since then I have had the opportunity of observing its good effects in cases occurring in the practice of other members of the staff, and by their courtesy I am enabled to present the following notes:

Case I. (Hospital No. 7,026).—J. R——, male, aged thirty-five; admitted June 1, 1883 (service Dr. Callan). General health good. Examination showed a large serpiginous ulcer in the centre of the cornea. Pain and great photophobia. Ordered hot applications constantly and a solution of atropia (grs. ij. to ℥ j.) t. i. d.

Second day.—Corneal process extending, and threatening to perforate. A Saemisch section was done, carrying the knife entirely across the cornea, and through the centre of ulcer.

Seventh day.—Eye showing no signs of improvement, a solution of hydrogen peroxide (one per cent.) was instilled every two hours, and atropia t. i. d.; heat continued.

Ninth day (second of hydrogen peroxide).—Process arrested, and edges of ulcer clear cut and surface clean. Patient entirely free from pain.

Thirteenth day (third of hydrogen peroxide).—Ulcer healing rapidly. Injection disappearing.

Fourteenth day (fourth of hydrogen peroxide).—Patient left hospital, with directions to occasionally use solution of peroxide of hydrogen at home. Came back three weeks later to report. Ulcer entirely healed, and only a small macula remaining, as evidence of previous trouble.

Case II. (Hospital No. 7,757).—A. C——, male, aged twenty; admitted June 22, 1883 (service Dr. Moore), with a gonorrhœal ophthalmia of left eye, of forty-eight hours' standing. General health fair. Both lids much swollen and bathed in pus; chemosis marked, and cornea slightly hazy. Right eye immediately sealed with a watch-glass, for protection. Lids of affected eye were touched with a ten-grain solution of silver, and a one per cent. solution of peroxide of hydrogen was instilled every half hour. Atropia (grs. ij. to ℥ j.) t. i. d., and ice compresses constantly.

Second day.—Secretion much diminished, swelling, and tension of lids less, and corneal process arrested. Solution of hydrogen peroxide now instilled every hour.

Third day.—Swelling of lids steadily decreasing; chemosis much less and secretion reduced fully one-half; cornea clear. Patient free from pain. A saturated solution of boracic acid has been injected between lids every half hour. Solution of silver continued once daily.

Fifth day.—Patient is now able to open eye to a limited extent, and swelling of lids, chemosis, and secretion rapidly disappearing.

Ninth day.—Solution of hydrogen peroxide discontinued, as secretion had entirely ceased, and cornea remained clear. Is now able to open eye fully one-half. Cold, silver, and atropia continued.

Thirteenth day.—The solution of silver, grs. x. to ℥ j., changed to a solution of grs. v. to ℥ j. Ice applied four

times daily, for half an hour at a time, instead of constantly, as heretofore. Atropia twice a day, and solution of boracic acid injected between lids once every three hours. Injection of conjunctiva nearly all gone.

Eighteenth day.—Ice discontinued and a cold solution of boracic acid substituted, to be used t. i. d. Solution of silver (grs. v.) continued, to prevent granulations.

Twenty-second day.—Patient discharged entirely cured. Cornea without a blemish.

Case III. (Hospital No. 8,086).—D. G——, male, aged fifty; admitted June 30, 1883 (service Dr. Callan), with a central ulcer of cornea. Patient run down and suffering from chronic malarial poisoning. Was put on use of hydrogen peroxide (one per cent.) immediately, instillations every three hours, atropia(grs. ij. ℥ j.) t. i. d., and quiniæ sulph. (grs. v.) twice a day.

Third day.—Ulcerative process arrested and evidences of repair beginning. Patient free from pain.

Fifth day.—Patient left hospital, well on way to complete recovery.

Case IV. (Hospital No. 8,168).—A. W——, female, aged twenty-nine; admitted July 5, 1883 (service Dr. Moore), with a gonorrhœal ophthalmia of both eyes. In right eye ophthalmia of three, and in left of two days' duration. General health good. Lids of both eyes tense and much swollen; abundant secretion; chemosis marked, especially in right eye; cornea of right eye hazy; cornea of left eye clear. Finding great difficulty in everting lids, and owing to pressure on cornea, a double cantholysis was done immediately, followed by free hemorrhage, which was encouraged. The lids of both eyes were touched with a ten-grain solution of silver, and ice compresses ordered constantly. Atropia (grs. ij. to ℥ j.) t. i. d., and solution of hydrogen peroxide (one per cent.) instilled in both eyes every hour. Every half hour a saturated solution of boracic acid was injected between the lids.

Second day.—Secretion much less and swelling of lids reduced; no pain; cornea of right eye slightly more hazy; cornea of left eye clear; chemosis in both eyes much the same.

Fourth day.—A small ulcer developed in right eye, but haziness, which two days previous had been rather diffuse, now limited and of superficial character; cornea of left eye clear and chemosis nearly all gone; very little secretion, and swelling of lids much reduced. Solution of silver discontinued in left eye.

Sixth day.—Ulcerative process confined, but the haziness again extending over upper portion of cornea of right eye. Ice changed to hot applications, and hydrogen peroxide (three per cent.) instilled hourly. Left eye steadily improving; no secretion; lids of normal thickness, and patient is able to open her eye.

Seventh day.—In right eye secretion much increased by heat, but ulcer looks better and is not extending. The slight haziness observed day before gone. Left eye doing as well as possible; ice continued occasionally.

Twelfth day.—Ulcer in right eye much improved and secretion rapidly disappearing; swelling of lids and chemosis less; silver discontinued. Left eye practically well, only a slight injection remaining.

Seventeenth day.—No secretion from right eye. No chemosis, and swelling of lids all gone. Ulcer shows signs of healing. Able to open eye one-half. Heat, atropia, and hydrogen peroxide continued.

Eighteenth day.—Conditions much the same. Solution hydrogen peroxide discontinued. Boracic acid solution (saturated) injected between lids every hour.

Twentieth day.—Ulcer nearly well; very little injection; able to open one eye fully. Heat applied twice a day; atropia, t. i. d. and solution boracic acid four times daily. Left eye entirely well.

Twenty-first day.—Ulcer healed, and only evidence of disease remaining is a slight conjunctival injection. All treatment stopped.

Case V. (Hospital No. 8,418).—M. J——, female, aged twenty-five; admitted July 13, 1883 (service of Dr. Minor), with a suppurative keratitis of left eye, involving entire cornea, result of burn from chloride of lime. General health good. A Saemisch section was made, carrying cut entirely across cornea, thereby liberating a large quantity of pus, which entirely filled lower two-thirds of anterior chamber. A solution of hydrogen peroxide (one per cent.) was ordered instilled every two hours; hot applications constantly and atropia (grs. ij. to ℥ j.) t. i. d.

Second day.—Cornea, which yesterday it was feared would slough away as a whole, now shows signs of clearing and the patient is free from pain.

Third day.—Corneal suppuration is arrested and is gradually clearing, especially in upper and outer margin.

Ninth day.—The cornea has steadily cleared and the iris is distinctly visible through upper half. Instillations of hydrogen peroxide continued every two hours and atropia and hot applications as before.

Tenth day.—Lower portion of cornea is now clear and there only remains a small central spot that is cloudy. Injection rapidly disappearing and the patient is able to open her eye fully.

Twelfth day.—Very slight injection remaining and eye well.

FOREIGN BODY IN THE TRACHEA OF AN INFANT EIGHT MONTHS OLD—TRACHEOTOMY—RECOVERY.

By A. SCHAPRINGER, M.D.,
NEW YORK.

James M——, eight months old, of 345 East Sixtieth Street, was brought to my office on June 6, 1883, on account of alarming dyspnœa which had supervened suddenly the same morning while he was eating a slice of an orange. The child had first been taken to a neighboring drug store, where a dose of syrup of ipecac was administered. This brought about vomiting, without, however, relieving the dyspnœa. When first seen by me, the child was cyanosed. Both inspiration and expiration were labored. Auscultation over the trachea revealed a rattling sound both on inspiration an expiration. The latter was brought to a sudden stop, a peculiar click. The rattling was perceptible to the touch also. These signs left no doubt as to the presence of a movable obstruction in the windpipe. After a few ineffectual attempts to remove it by inversion, the child's condition in the meanwhile becoming more and more alarming, I performed tracheotomy, assisted by Dr. A. Fridenberg and Messrs. Tynberg and Schulmann, students of medicine. The child was given a few whiffs of chloroform. The hemorrhage was slight, but one vessel requiring to be secured. The trachea was scarcely opened when the foreign body was expelled through the perforation by a fit of coughing. It proved to be an orange-pit. Regularity of respiration not becoming re-established after the lapse of a few minutes, a flexible catheter was introduced and a small quantity of blood and mucus removed by aspiration. In about twenty minutes the child had so far recovered that I could proceed to close the wound. I first united the lips of the tracheal incision by a few silk sutures, and carried the ends of the threads through both the upper and lower angle of the integumentary incision, which I closed by a separate row of sutures. I avoided including the mucous membrane in the tracheal sutures. Catgut, which would have been preferable to silk, was not accessible. The wound healed by first intention, with the exception of the angles where the threads of the deep sutures had been led out. These could be removed after the lapse of a few days. The little one has been well ever since.

The interest of this case centres in the fact that there is no record, in this country at least, of so young a child having survived tracheotomy for the removal of a foreign body.

226 East Sixtieth Street.

ON THE TREATMENT OF EPILEPSY.[1]

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GENTLEMEN: I devote this lecture to the treatment of that most formidable of the neuroses—epilepsy. When we survey the numerous remedies which have been proposed for this disease—remedies often uncertain and inefficacious—we easily comprehend the discouragement and despair of many physicians who have pronounced epilepsy incurable; moreover we see why the ancients attributed a divine origin to this affection, for to them the words *morbus sacer*, *morbus divinus*, testified sufficiently that the disease was generally above the resources of their art. But this feeling of discouragement ought no longer to exist. We have already found in the bromides a remedial agent which enables us to cure one half our epileptic patients, and we may be permitted to indulge the hope that some day we shall find a remedy still more powerful, which shall give us complete mastery of the disease. For this end we shall labor, and with all zeal.

It may almost be said that every medicine under heaven has at one time or another been prescribed for epilepsy. Do not then expect from me an enumeration of this long list of medicaments; I shall merely touch upon a few of them to lay particular stress on such as experience has proved efficacious. To give some system to my exposition, I shall divide the treatment of epilepsy into two parts: first, general treatment; second, treatment of the attack. In order to grasp the principles of the general treatment it is necessary to enter somewhat into details respecting the pathogeny of this affection. Sometimes epilepsy is manifestly dependent on a lesion of the nervous system, it is then symptomatic; sometimes no lesion is apparent, and we call the epilepsy essential.

As for symptomatic epilepsy, experimental physiology and clinical observation have given us certain proofs of the influence of lesions of the nervous system on the development of this neurosis. Brown-Séquard by his curious experiments on guinea-pigs has shown us that epilepsy may be produced by section or ablation of the sciatic nerves, and what is stranger and still more inexplicable, that this experimental epilepsy affects not only the animal so mutilated, but also its offspring, so that epileptic guinea-pigs, in consequence of lesions of the sciatic nerves, ever afterward have epileptic progeny.

The same symptoms are produced in certain lesions of the spinal marrow or cerebrum. Westphal rendered guinea-pigs epileptic by blows on their heads. Hitzig, Eulenburg, and Landois by irritating the motor cortical centres of animals by mechanical and chemical agents, and by electricity, brought on attacks of epilepsy. Points have been localized in the cerebro-spinal axis whose excitation produces epilepsy, and Albertoni and Koloman-Balogh have given precise directions in this regard. Roberts Bartholow has gone even farther, and in a patient the surface of whose brain was denuded to some extent, he has produced epileptiform convulsions by applying electricity to the exposed cortical substance.[2] Clinical observation strikingly confirms these experimental facts, and the annals of medicine contain a vast number of cases where wounds and irritations of nerves have determined epilepsy, and where it has sufficed to remove the vicious cicatrix, or the foreign body embedded in the tissues, in order to obtain a permanent cure. In other instances the epilepsy has resulted from injuries or compressions of the cerebral substance, by spiculæ of bone, by abscess, by tumors; the removal of the bony splinters or the disappearance of the tumors has brought about complete cure.

It is in cases of this kind that the application of the trepan in the treatment of symptomatic epilepsy gives good results. Extolled by the ancients in an empirical fashion, the trepan has of late years found its legitimate place, a place, in fact, of such importance that we have seen in America an eminent surgeon perform this operation for the cure of epilepsy twenty-three times in five years, and obtain seven complete recoveries. Echeverria, in his interesting statistics, gives the results of one hundred and forty-five cases, ninety-three of which were permanently cured by the trepan.[1]

In the same group we place anti-syphilitic medication, for oftentimes the relation which exists between this neurosis and syphilis is explained by the presence of gummata, or bony tumors compressing the brain and spine, and it is quite clear, as Fournier and Dreschfeld have shown, that in cases of this sort the specific is the proper treatment for the neurosis. In this same category we must place epileptiform convulsions due to the presence of worms in the intestines, and which disappear with the expulsion of the offending cause. In this group, too, we must place those cases of epilepsy connected with troubles of the genital functions, for the relief of which Marshall Hall proposed castration.

It was formerly maintained that epilepsy results from a chronic inflammation of the brain and spinal cord; a variety of epilepsy even was described under the name of plethoric epilepsy. Morgagni, Fothergill, and others defended this doctrine of the constant inflammatory origin of epilepsy, hence their antiphlogistic treatment, which consisted in blood-letting and the most powerful derivatives, such as cauteries, blisters, and setons. This kind of treatment is now a thing of the past; it gave no certain results of any value, and was based on a hypothesis which the recent anatomo-pathological researches on essential epilepsy have not confirmed.

We know that since the labors of Schroeder-Van der Kolk and Echeverria, the post-mortem disclosures in deaths from epilepsy have generally been alterations of the medulla oblongata, characterized by an intercellular albuminous exudation and capillary ectases. It may, however, be reasonably affirmed that these lesions are the consequence rather than the cause of attacks of epilepsy. Nevertheless, the rachidian bulb has a predominant part in epilepsy, and it is by modifications of its functions that we best explain the convulsive paroxysms.

The first phase of the attack, that which corresponds to the initial outcry, to the loss of consciousness, and to the tetanic contraction of all the muscles of the economy, would seem to result from an excitation of the medulla oblongata, sufficient to cause sudden anæmia of the cerebrum and of the bulb itself. Next comes the asphyxia, consequence of this tetanic state, and the passive congestion of the cerebro-spinal axis which it produces. Next in order is a period of reaction, in which the accumulation of venous blood in the encephalon and spinal cord determines clonic convulsions everywhere, the respiration is stertorous, the face is blue, the attack terminates with exhaustion of the nervous centres implicated. In these phenomena the medulla oblongata is principally concerned, and the therapeutic indication is plain; every medicament which tends to diminish the excitability of the medulla oblongata, and the cerebral anæmia which results from it, is applicable to the treatment of epilepsy. But before beginning the consideration of the physiological treatment of epilepsy, I will say a few words about the empirical treatment.

Certain simple herbs have enjoyed a great repute in the treatment of epilepsy, and the common people have accorded heroic curative virtues to a number of indigen-

[1] Translated (by permission) from advance sheets for THE MEDICAL RECORD by E. P. Hurd, M.D., Newburyport, Mass.

[2] Brown-Séquard: Researches on Epilepsy, its Artificial Production in Animals, and its Etiology, Nature, and Treatment in Man, Boston, 1857; Pietro Albertoni: Influence of the Cerebrum in the Production of Epilepsy, Milan, 1876; Roberts Bartholow: Experimental Investigation into the Functions of the Human Brain, Am. Jour. Med. Soc., April, 1874; Westphal: Berliner klinische Wochenschrift, Nos. 24 and 39, 1871; Vulpian: Epilepsy in the Guinea-pig after Section of the Sciatic Nerve.

[1] Trepanning in Epilepsy, Boston Medical and Surgical Journal, 1872; Echeverria: Arch. de Med. de Paris, 1878, t. ii., p. 529; J. Mason Warren: Boston Medical and Surgical Journal, 1867.

ous plants which deserve a brief mention here, as their anti-epileptic properties have been endorsed by certain physicians.

Galium verum and galium mollugo ("white cheese rennet," "yellow ladies' bedstraw," are the familiar names) are reputed as having quite special virtues in the treatment of epilepsy, and we are frequently referred to the observations of Jourdan and Miergues, fils. I believe that even now certain religious communities in France treat this disease with the expressed juice or an infusion of this plant.

Valerian is also an ingredient of a great many anti-epileptic preparations, and its employment in this disease is supported by a respectable number of eminent names. I will pass rapidly by hyoscyamus, vaunted by Storck and Hufeland; daffodil, employed with success by Dufrenois, Vieillechèse, Delonchamps; bitter orange leaves, counselled by Larcher; peony, extolled by Portal, to devote a moment's consideration to belladonna, which, before the introduction into therapeutics of the bromides, was one of the medicaments the most depended on in the treatment of epilepsy, supported, as it was, by the authority and experience of Trousseau. Belladonna is given in the form of pills, each containing one-sixth of a grain of the powder and one-sixth of a grain of the extract; dose, one pill morning and evening the first month, and every succeeding month you increase the dose by one pill a day till you arrive at the enormous dose of twenty pills night and morning.

All these medicaments, belladonna included, are to-day completely abandoned; they have had to yield their place to more active and more certain medicines, and I have only mentioned them here because they belong to the history of the therapeutics of epilepsy. By the side of these vegetable substances we must place the mineral remedies which have been prescribed for the falling sickness; these are especially certain metals, such as silver, copper, and zinc.

What physiological action can these metallic substances have in the treatment of epilepsy? We cannot say; possibly we must invoke, in explanation, the strange phenomena of metallotherapy observed in accordance with Burq's method. However this may be, silver is administered in the form of pills of the nitrate, and in doses sufficiently large and sufficiently prolonged to produce discoloration of all the tissues. They tell a story of an aide-de-camp of King Louis Philippe, who had been cured of his epilepsy by this treatment, but whose skin was changed to a deep blue. I myself saw, twenty years ago, a man transformed into a negro (blue man they called him) by the internal usage of nitrate of silver, but who, notwithstanding this kind of poisoning, was not cured of his disease.

Copper is administered in the form of ammonio-sulphate of copper, and is given in the dose of ten centigrammes a day in capsules. Zinc is given in the form of oxide; Herpin is the most zealous advocate of treatment by this remedy. Out of thirty-six patients treated by oxide of zinc he obtained twenty-eight cures; the dose given was ten centigrammes three times a day, gradually increased till six grammes were taken in the twenty-four hours. Like the vegetable treatment above described, the metallic treatment of epilepsy has gone out of vogue, and to-day it is to the bromides that everyone has recourse.

When Balard, in 1826, discovered bromine, and the striking resemblances between this substance and iodine were pointed out, it was proposed to substitute the first medicament for the second, and it was in the treatment of syphilitic affections more especially that the substitution was made. From 1840 to 1850, in the Hôpital du Midi, the physicians attached to this hospital, and in particular Ricord, employed bromide of potassium in the place of iodide of potassium. The first labors recording the results of this treatment, and showing the physiological and therapeutical properties of the bromide were made by two internes of the hospital, Rames of Aurillac and Huette, of Montargis. The thesis of Rames appeared April 25, 1850, and that of Huette several weeks after. Five years ago (in 1878) George Huette, in an excellent monograph on bromide of potassium, showed us the progress made in the usage of bromide of potassium since the first experimental and clinical studies of his father in 1850. Those early investigations, while clearly setting forth the physiological, therapeutical, and even toxic effects of the bromide, made no mention of any application of the drug to the treatment of the neuroses, and in particular to epilepsy.

The year following Locock, taking up a discovery, made several years before by a German, Otto Graf, who had noted in himself a marked depressant action following the use of large doses of bromide of potassium, and in particular, sedation of the genital functions, for the first time applied these data to the treatment of hystero-epilepsy and of epilepsy, and out of fifteen cases treated by the bromide recorded fourteen cures. The name of Locock ought to be immortalized in the history of medicine; he deserves the gratitude of the whole human race, because in consequence of his happy discovery of the use of bromide of potassium in epilepsy, he has enabled us to cure one-half our cases.

After the labors of Locock came those of Radcliffe, Brown-Séquard, and especially of Williams, showing that one could in five months diminish in a marked manner the number of attacks in a given number of epileptics. From this moment, bromide of potassium has been almost exclusively employed in the treatment of epilepsy, and the memoirs of Voisin, Legrand du Saulle, Falret of Lasigue, etc., in our country, show the beneficial results which may be expected.

Consult these documents, examine the statistics furnished by these physicians, and you will see that in more than half the cases we may favorably modify the condition of epileptic patients. I say modify, and not cure, for I range myself on the side of those who contend that a complete and permanent cure of real epilepsy by the bromide treatment is rare, without being, nevertheless exceptional. But it is possible, in one case out of every two, to cause the attacks to disappear, on condition always, of prolonging indefinitely the medication; and this is no small blessing. The bromide is, then (in the words of Legrand du Saulle), the muzzle of epilepsy, rather than a definite curative medicament.

How ought you to institute the bromide treatment? Which bromide ought you to choose? What are the inconveniences of this medicament? How long ought you to continue the treatment? These are questions which I must now answer.

But I must first of all say something about the physiological action of the bromides. Already, *apropos* of diseases of the heart, I referred to the action of bromide of potassium on the economy, and I need not repeat what I then said. All physiologists are to-day agreed in conceding to the bromide a sedative action on the cerebro-spinal axis, and in particular on the medulla oblongata. If any point is under dispute, it is not whether this substance has an elective action on the rachidian bulb, but whether this action is primitive or secondary. Some, as Germain Sée and Binz, maintain that the bromide acts first on the heart, and consecutively, by producing anæmia, on the bulb; others, on the contrary, affirm that the heart is affected secondarily; that it is only influenced because the medulla oblongata has been first depressed. This depressant action on the excito-motor power of the mesocephalon is of marvellous applicability to epilepsy, since we have just seen that in this neurosis it is excitation of the rachidian bulb which determines the congeries of symptoms which characterize epilepsy, and this physiological action explains why suspension of the convulsive attacks follows the use of the bromide.

In the bromides what is the active principle? Is it

the bromide, or is it the base? This is a question which has been much studied, and which seems to us to-day to be solved. The bromide plays a considerable part in this depression of the bulbar functions, but the base does not by any means remain inactive or inert. And this it is which explains the difference of action of the different bromides. We know, especially since the labors of Laborde, that the salts of potash have a much more marked depressant action than the salts of soda, and that they have a toxic effect on the heart in particular. Already, when treating of purgatives, I showed you the difference which exists between the salts of potash and of soda; there is the same difference between chlorate of potash and chlorate of soda, as Laborde has shown; also between bromide of potassium and bromide of sodium, the first being more active than the second, while on the other hand the sodium salt is better tolerated than the potassium salt.

I have made many trials of bromide of sodium in epilepsy, and notwithstanding the considerable doses exhibited, 10 to 12 grammes (150 to 180 grains) a day, I have never succeeded in arresting attacks either of petit-mal or grand-mal by this salt. I have, therefore, been astonished to see in Hammond's remarkable work on "Nervous Diseases," that this eminent neuropathologist gives the preference to bromide of sodium in epilepsy.[1]

By the side of bromide of potassium we must place bromide of ammonium, which has a still more powerful action than the first; then bromide of calcium, with which I have never experimented, but which is much employed in America, and especially by Hammond. The latter, while giving the preference to bromide of sodium, considers bromide of calcium superior to the potassium salt; one gramme producing a sleep which is calm and refreshing. His vehicle of administration of the calcium preparation is syrup of the lactophosphate of lime.

I have enumerated the alkaline bromides, of which the most employed is assuredly bromide of potassium. These bromides are often associated in prescription, a mode of administration called the *mixed bromides*.

There are other bromide compounds which are sometimes given, as the bromide of zinc and bromide of camphor. Theoretically, the zinc bromide should be a good preparation, since zinc oxide possesses anti-epileptic properties, as we have before seen. Bromide of zinc is used in England and America in the form of a syrup. Hammond speaks highly of this salt in epilepsy.[2]

Introduced into therapeutics by Deneffe, of Brussels, and investigated chemically by Clin, therapeutically by Bourneville, bromide of camphor has been employed in the treatment of hysteria and epilepsy, and although favorable results have been obtained at the Salpetrière, yet this preparation has not come into general use. Thus far the bromide of potassium remains the medicament the most active and most employed in the treatment of epilepsy.

How shall bromide of potassium be administered? Although it has been attempted to introduce this salt by the hypodermic method and by enema, these tentatives have been promptly abandoned, and for the reason, as I told you when treating of diphtheria, that bromide of potassium has an irritant and even caustic action. We are then restricted to the alimentary canal as the only practical way of introduction, and when given it should be diluted with a considerable quantity of water; the dragees, granules, and compressed pills containing bromide should be discarded. I should add that when you are forced to increase the dose of this salt, as in epilepsy generally, you should require the patient to partake freely of milk, in order to avoid the gastro-intestinal irritation which results from the prolonged use of the bromide in large doses.

The quantity of bromide which ought to be administered daily is very variable. From twelve to fifteen grammes a day have been given; the medium dose, in the majority of cases, is eight grammes. This dose cannot be given from the first; you must begin with smaller doses, as one gramme morning and evening, and gradually increase the dose till you have obtained complete control of the disease. Voisin thinks that we should regard as the maximum dose that which determines abolition of the reflex sensibility of the pharynx. I believe that this is an excellent rule in the case of hysteria, but not in epilepsy, and that in this disease we must not only attain abolition of pharyngeal reflex irritability, but we must, if occasion demand, push the administration of the remedy even farther, till we have stopped the attacks. But it is absolutely necessary to have a bromide preparation which is chemically pure, for Voisin has shown that the impurities of this salt considerably modify the therapeutical effects which it produces.[1]

These large doses of bromide, given for therapeutic effect, are not without danger. They determine in certain patients a train of symptoms which in some instances have been grave enough to cause death, and to which the name *bromism* has been given. Besides the inconveniences mentioned in my lecture on hysteria, and which are the acne eruption, the disagreeable odor of the breath, the peculiar unpleasant taste of the saliva, there are certain nervous manifestations of a grave kind, such as I lately observed in one of my patients who had taken in one day thirty grammes (a troyounce) of bromide of potassium. These symptons consisted in a remarkable depression of the vital forces. The patient could not stand, could not make the least movement without difficulty. Intelligence was impaired, and there was aphasia and amnesia.

This state, in which the patient is plunged into a physical and moral brutishness the most deplorable, persists till elimination of the bromide by the various emunctories has taken place.

These inconveniences of the bromide treatment are again and again experienced by the epileptic patient, who finds himself often in a sad dilemma; either he must desist from the use of the remedy and see his fits come back, or persevere in the treatment, notwithstanding the depression of all his faculties and forces. Believe me, he will generally choose the latter as the lesser evil, rather than suffer those terrible attacks which are to the epileptic a menace always suspended over his head.

But it is especially in the delirium of action, which makes the epileptic a criminal without his knowing it, that it is necessary to employ the bromide in massive doses in order to overcome the mania which impels him, unconsciously, to deeds of violence. Nothing, in fact, is more curious than to see in the wards of our lunatic asylums men enjoying their intelligence and their reason who have committed, and would still commit, the most astounding murders, if their maniacal propensities were not kept in check day by day by immense doses of bromide.

How long should you continue the bromide treatment of epilepsy? Often a very long time, and even during the

[1] Hammond on Nervous Diseases, p. 806. Paris, 1879.

[2] W. A. Hammond: The Therapeutic Usage of Calcium Bromide, New York Med. Jour., 1872, and Bull. gen. de Therapeutique, 1872; also, Hammond on Diseases of the Nervous System, p. 886. Hammond's formula for bromide of zinc is as follows:

℞. Bromide zinc, ... grammes iij. (or gr. xlv)
Syrup simplicis..... ... grammes xxx. (1 fl. oz.)

M. Dose.—Ten drops three times a day. The quantity to be gradually increased till thirty drops or more are given at a time. Each dose should be well diluted with water before taking, as it is apt to offend the stomach.

[1] The purity of the bromide salt is a point of capital importance. It ought especially to be free from the iodide. To determine the presence of iodide of potassium, dissolve the suspected salt in starch water, add a few drops of nitric acid, and if there be any iodide of potassium present you will obtain a blue color from the formation of iodide of amyl. Lambert's method is even more delicate. Dissolve the bromide in a solution of potassium permanganate; if the bromide is pure the solution keeps its violet color, while it takes a yellowish tint if there are any traces of iodine present. According to Lambert a chemically pure solution of potassium bromide when treated by HCl, should evolve a few bubbles of CO_2. Treated by one gramme of benzine, and a few drops of bromine water, it ought not to give a rose color. Treated by HNO_3 and nitrate of baryta, it ought not to turn yellow (Adrien: Researches on the Chemical Composition of Preparations of Bromide of Potassium, Bull. gen. de Ther., t. lxxvii., 1870; Lambert: How to Detect the Presence of KI in Bromide of Potassium, Bull. gen. de Ther., t. lxii., p. 503, 1867).

entire life of the patient. When, moreover, you have obtained the full benefit of the drug, and have witnessed complete cessation of the attacks, you must not leave off abruptly the medicine, but must keep on with it for several years, gradually diminishing the dose, as Legrand du Saulle has advised.[1]

Under the influence of bromide medication, thus carried out, we witness mitigation, diminution in frequency, then disappearance—first of nocturnal then of diurnal attacks; then the vertiginous paroxysms and the aura cease, symptoms which most resist the bromide treatment. These favorable results you will, as I said, obtain in one-half your cases. But you can often anticipate what will be the result of the bromide treatment by determining the cause of the epilepsy. Here Voisin has given us valuable hints. The epilepsy which results from malformations of the cranium or cerebral tumors is rebellious to the bromide, while the functional and hereditary neurosis is amenable to this treatment. Sex has no influence one way or the other.

Such, gentlemen, are the leading indications and methods of the bromide medication in epilepsy. If not absolutely and certainly curative, this medication, nevertheless, represents a real therapeutic progress when we consider the unsatisfactory nature of the treatment of olden times. I ought to add, as an item of interest in this connection, that experimental physiology has confirmed ordinary clinical results; I allude to the recent curious experiments of Albertoni, who, after prolonged administration of the bromide to animals was not able to induce in them experimental epilepsy by irritating the cerebral cortex, although after giving atropine under like circumstances such convulsive attacks could easily be provoked.[2]

Other remedies which act on the medulla oblongata, or on the muscular system, have been prescribed in epilepsy, such as picrotoxine, bromide of gold, curare, and nitrite of sodium.

Curare or wourari has been tried hypodermically in epilepsy by Voisin and Liouville; the effects are not sufficiently encouraging to warrant continued use of this medicament, notwithstanding the more recent trials of Edlefsen and Kunze. Picrotoxine, the active principle of cocculus indicus, has been made the subject of study by Brown-Séquard, Glover, Bonnefin, Vulpian, and others. These researches show that picrotoxine has an elective action on the medulla oblongata, and may even determine a veritable experimental epilepsy. Planat has utilized this special selective action of picrotoxine in the treatment of epilepsy; I have myself experimented with it, but have not obtained favorable results except in alcoholic epilepsy—which will get well of itself if the patient will practise abstinence from alcohol. Vulpian has also tried it without any success. Add that picrotoxine is very poisonous, even in small doses, and we ought to conclude that this medicament should have a very humble place in the treatment of epilepsy.

Finally, Huchard has recently advised the association of digitalis with bromide in the treatment of epilepsy, and claims good results from the combination.

Thus far we have been occupied only with the general, or pharmaceutical treatment of epilepsy; it remains to speak of the hygienic treatment, and of that of the attacks.

If hygiene has not a preponderant part in the treatment of epilepsy, nevertheless it is not without influence on the production of the attacks. Here, as in hysteria, the question of marriage comes up for consideration. Ought an epileptic to marry? It is well to bear in mind, and to urge upon your clients, when they consult you in reference to the marriage of an epileptic, that epilepsy, with all its gravity, is not necessarily and fatally hereditary, and in giving this opinion you can fortify yourself by the authority of professor Laségue, than whom no one is more qualified to judge on questions of this kind. In fact, Laségue denies the hereditary nature of epilepsy. This is a matter of considerable importance, and holding this view we are enabled to tone down somewhat the sombre colors in which such a union would otherwise be invested.

If continence does not play an important part, it is not the same with venereal excesses, which have a most decided influence in the production of attacks. Masturbation is most pernicious to epileptics, and destroys, in a certain measure, the effect of the treatment by bromides.

Epileptics should live in the country and avoid crowded assemblies, political gatherings, concerts, shows, and the like. You must often have remarked that theatrical exhibitions are frequently interrupted by attacks of epilepsy, and this for the reason, principally, that the bad air and the heat of the apartments are deleterious to epileptics.

The alimentary regimen has a certain influence on the falling sickness. First of all, the alcohols are themselves a cause of epilepsy, and you are not ignorant of the studies of Magnan as to alcoholic epilepsy, and in particular that form of epilepsy which is produced by absinthe; it is proved that these nerve-excitants produce epilepsy in men and animals; you ought then to interdict the use of alcoholic beverages to your patients.

You ought also to advise a diet which shall contain nitrogenous substances in very sparing quantity. It seems, in fact, proven that a vegetable diet diminishes in a marked manner the number of attacks, while an azotized diet considerably increases them; the epileptic, then, should be strictly vegetarian. To sum up the rules of hygiene, the epileptic patient should live much in the open air, be very moderate in sexual indulgences, take a great deal of exercise, abstain from spirituous liquors, and live almost exclusively on vegetable food.

As for the treatment of the attack, it consists in placing the patient in a horizontal position, and loosening any part of his apparel which may cause constriction of the neck or thorax. It is generally customary to place some hard substance (as a clothes-pin) in the mouth of the patient to prevent biting of the tongue, a means which has not been very successful; the foreign body, if too resisting, breaks the teeth of the patient, and if too little resisting, is liable to be bitten off in the struggle, and to find its way to the throat or windpipe of the patient, causing suffocation.

Certain measures have been advised to prevent the convulsive seizures, such as the energetic flexion of the great toe, compression of the temporal regions, of the infra-occipital hollow, etc. Others have counselled by various compressions to prevent the aura from spreading; Rozier has even devised a special instrument for this purpose. All these means are only of use in certain exceptional cases where the epileptic has premonition of his attack by sensations of aura which precede the convulsive seizure by a brief interval. It has also been proposed to employ during the paroxysm, hypodermic injections of apomorphia, inhalations of bromide of ethyl, and nitrite of amyl. Bourneville has given us some interesting facts relating to the two last medicaments, but these inhalations have not come into general use.[1]

[1] His rules are as follows: We will suppose a case apparently cured. During the first year—fifteen days of each month with the bromide every day in the usual dose, and fifteen days with the bromide every other day. In the second year—fifteen days of every month with the bromide every third day, and fifteen days with the bromide every day. In the third year—fifteen days of every month with the bromide every day, and fifteen days with the bromide every fourth day. In other cases (and this is now his habitual method), after the patient has gone one year without an attack, bromide treatment six days in the week. After fifteen months of freedom from attacks, bromide five days in the week. After eighteen months, bromide four days in the week. At the end of two years from the last attack bromide only three days in the week (Traitement et Curabilité de l'Epilepsie, by Legrand du Saulle).

[2] Albertoni, Action de quelques Médicaments sur l'Écorce cérébrale à propos du Traitement de l'Epilepsie.

[1] Magnan: Epilepsie Alcoolique, Action spéciale de l'Absinthe, Compt. Read. de la Soc. Biol., t. xiii., Paris, 1869; Rodet: Troubles Caused by the Abuse of Alcohol and of Absinthe. Gaz. Méd. de Lyon, t. xvi., pp. 590-598, 1864; Dujardin-Beaumetz: Art. Absinthe, in Dict. de Ther., 1882; John Mersin: Influence of Food and Hygiene in Epilepsy, West Riding Lunatic Asylum Med. Reports, 1875; Bourneville et Ollier: Recherches sur l'Action physiologique du Bromure d'Ethyle dans l'Hystérie et l'Epilepsie, Gazette Méd. de Paris, No. 35, 1880; Bourneville: Du Nitrite d'Amyle dans l'Epilepsie, Soc. de Biol., June, 1875.

This finishes what I deemed important to say relative to the treatment of epilepsy, and the beneficial influence of therapeutics in this terrible disease. In the next lecture I shall consider chorea and its treatment.

Progress of Medical Science.

IRREGULAR WORK WORSE THAN OVERWORK.—At the present time, when we hear so much of the evil consequences of what is rather loosely termed "overwork," the following remarks of the *British Medical Journal*, July 14, 1883, seem quite *apropos*: "'Overwork,' properly so called, is not so likely to occur, or if it occur to do mischief, as irregular or disorderly activity. If there be not sufficient time for recuperation in the course of work, exhaustion must take place. If the work done be of such a nature as to put an undue strain on any one faculty, harm may be done, although the brain as a whole may not be severely taxed. If the supply of brain-food be insufficient to enable the recuperative faculty to compensate by food for consumption in use, there must be exhaustion. If work be exacted when any indication of exhaustion is present, it is impossible that injury shall not be inflicted. It follows that educators have especial need of care to avoid engaging the brains of their pupils in work for more than very short periods, and to provide intervals during which there may be rest of the centres specially taxed. Much may be done by changing the kind of work frequently. We are of opinion that no growing child should be kept longer than half or at most three-quarters of an hour at one task, or even the same description of work. Again, the great centres of relation should not be overtaxed. Vision, hearing, the speech centre, and the centre specially concerned with written language, whether in writing or reading, should not be wearied. Brain weariness is the first indication of exhaustion. The faculty of 'attention' is perhaps one of the most easily vulnerable of all the parts or properties of brain-function. It is the faculty which most readily becomes permanently enfeebled, and when weakened entails most trouble in adult life. In children it is difficult to catch and fix the attention. No effort should be spared to secure this fixity of thought; but in order to avoid weakening the power of 'thinking'—as distinguished from 'thought-drifting'—the teacher should not strive, or desire, to hold the attention by any effort on *his* part longer than it is voluntarily given by the child. The slightest indication of exhaustion should at once be met by a change of task. If these hints, general as they are, can be reduced to practice, we think there is little fear of 'overwork' or harm from brain activity. Desultory and insufficient work is more to be feared by far than 'overwork,' because the brain, like every other part of the organism, grows as it feeds, and it can only feed as it works."

A RENAL FORM OF TYPHOID FEVER.—Dr. Didion has chosen this subject for an inaugural dissertation, and comes to the following conclusions. Typhoid fever produces a renal congestion, which plays an important part in the course of the disease. Albuminuria is almost constant, but generally slight and temporary; when abundant, it is a sign of true nephritis. The real inflammation is both parenchymatous and interstitial, and produces certain characteristic symptoms, such as asthenia, stupor, dryness of tongue, œdema of the face and legs, lumbar pains, cutaneous eruptions (pemphigus, ecthyma, boils), and an alteration in the urine, which has a reddish color and the odor of boiled bread; in the deposit, red and white blood-corpuscles are found, as well as casts; the urine contains a large quantity of albumen. The diagnosis can easily be arrived at by the above-mentioned symptoms. The termination is often fatal, either from asthenia or uræmia. As to the treatment, Bouchard recommends carbolic acid and the salicylates, Polli the sulphites, Klebs the benzoate of potash. Leeches, mustard poultices, and cupping in the lumbar region are useful; but blisters, even with the addition of camphor, must be avoided. In certain cases, the disappearance of the symptoms is accompanied by abundant diuresis, which ought, therefore, to be favored if possible; but all diuretics are not equally good, those which possess irritating properties must be avoided. The best in these cases is milk, pure or mixed with water. Whatever may be the way in which it acts on the kidneys, it is always well borne, and its action is double; it increases the secretion of urine, and hastens the elimination of toxic principles, without producing any irritation, even in the most acutely inflamed kidney. Subcutaneous injection of pilocarpine might perhaps be useful; in one case, when the skin was dry and burning hot, Dr. Didion injected twice daily one-sixth of a grain of pilocarpine, and under its influence the skin became moist and abundant sweat was produced; the tongue also was less dry than before; the temperature fell in two days from 105.8° to 98.6° F.; but three days later the patient died, after the temperature had once again reached 104° F. New investigations are necessary before we can arrive at definite conclusions. As for the cold baths, Gubler thinks that they are contra-indicated in case of nephritis, but Libermann considers their use as surely beneficial in spite of it. Several patients who had been subjected to that treatment did not complain of any inconvenience, and cold lotions rapidly applied to the trunk and limbs with a sponge seem to relieve the patient, lower the temperature, and re-establish the functions of the skin. All these advantages must be weighed against the danger of a renal congestion; but further experience alone can show which treatment is most advantageous.—*British Medical Journal*, July 14, 1883.

ALBUMINURIA FOLLOWING CUTANEOUS IRRITATION.—Dr. Mihran has investigated this subject, and formulates the following propositions: 1. Cutaneous excitement, by whatever means produced, may give rise to albuminuria. 2. The amount of albumen, which, in such a case, can be almost at once detected, will vary according to the degree of excitement, the energy of the exciting agent, the extent of surface acted on, and the duration of the excitement. 3. The duration of the albuminuria will also be determined by the same conditions; in most cases it is transient, but, under the influence of extreme peripheral irritation, it may persist, along with an alteration in the organic structure involved. 4. Albuminuria proceeding from cutaneous excitement depends proximately on a disturbance of vaso-motor innervation.—*Journ. Cut. and Vener. Dis.*, July, 1883.

A NEW METHOD OF APPLYING PRESSURE TO ENLARGED TESTICLES.—In the *Lancet* for July 7, 1883, Dr. Corbett describes a simple method of applying pressure to enlarged testicles, which is calculated to do away with many of the objections against the ordinary plaster strapping. He prefaces the explanation of his plan by saying that he derived the idea from a homely source, nothing more or less than seeing the means employed for encasing a football; barring that, instead of having the encasing material made of leather, he had it made of india-rubber—such as one sees in the construction of the balls in spray producers, etc. The cases he recommends should be made of different sizes and thicknesses, and oval in shape. The means of tightening the cases and applying the pressure would be identically the same as in the football cover—*i.e.*, by lacing. There should be an opening at the neck of the case to allow the passage of the cord. This opening would be surrounded by a ring (interrupted) of leaden wire, to ensure its patency and to prevent pressure on the structures of the cord. The leaden wire ring being interrupted, its softness would offer no obstacle to its easy adjustment round the neck of

the enlarged gland. With a supply of such cases, the treatment of an enlarged testicle would offer but little difficulty. It would simply mean the selection of a rubber case of the right size and thickness, and capable when laced up of exercising a steady equable pressure on the enlarged organs, and applying the case to the testicle and lacing it up. If considered necessary, the testicle could first be enveloped in a thin layer of cotton-wool. This would prevent any possibility of the skin being nipped or chafed by the lacing. As the gland reduces in size a smaller case would be applied, and thus a steady pressure kept up until a cure was effected. The above plan has the advantages of simplicity, neatness, and quickness in its application to recommend it. It involves no elaborate apparatus, and does away with many, if not all, of the objections connected with the operation of strapping with plaster.

A Case of Tracheocele.—A merchant, twenty-nine years of age, of previous good health except for an attack of rheumatism, acquired a bronchitis with severe cough. After a severe attack of coughing he suddenly noticed a small tumor, the size of a hazel nut, just above the sternum. In three days this had increased to the size of a pigeon's egg, and incommoded respiration and deglutition. The tumor remained stationary for three weeks, when it suddenly opened and discharged blood and pus, and became much reduced in size. It grew again slowly for a time, but remained smaller and softer than before. It was larger during expiration and diminished again in size during inspiration. Upon compression a fine crepitation could be felt, and the tumor disappeared. The treatment consisted in permanent compression of the hernia by a sort of truss, and resulted in a cure after the expiration of six weeks. The patient, however, became the victim of chronic asthma, from which relief could only be obtained by constantly increasing doses of morphine. From a study of this case, and twelve others, reported by different observers, Dr. Détis arrives at the following conclusions: 1, the causes of the affection are bodily exertions of any sort; 2, the principal symptoms are enlargement of the tumor during expiration, disappearance of the same under compression, and a muffled, squeaking voice; 3, the prognosis is favorable; 4, treatment is purely local and consists in steadily maintained compression.—*Centralbl. für Chirurgie*, July 7, 1883.

Bathers' Cramp.—Some recent bathing fatalities have again drawn attention to the important subject of bathers' cramp. If the nature and causes of this dangerous affection were more generally known, it is probable that many deaths from drowning in the bathing season might be prevented. Cramp is a painful and tonic muscular spasm. It may occur in any part of the body, but it is especially apt to occur in the lower extremities, and, in its milder forms, it is limited to a single muscle. Pain is severe, and the contracted muscles are hard and exquisitely tender. In a few minutes the spasm and pain cease, leaving a local sensation of fatigue and soreness. When cramp affects only one extremity, no swimmer or bather, endowed with average presence of mind, need drown; but when cramp seizes the whole of the voluntary muscular system, as it probably does in the worst cases, nothing, in the absence of prompt and efficient extraneous assistance, can save the individual from drowning. Although the intimate nature of muscular cramps, and the precise mode in which they are established, are still unknown, experience has furnished us with sufficient data on the subject to enable us to recognize the chief conditions of their causation. These conditions are: a peculiar individual susceptibility or idiosyncrasy; the shock of cold applied to the general surface of the body; prolonged muscular exertion; and forcible and sudden muscular exertion, especially in the direction of the extension of the extremities. There can be no doubt about a liability to muscular cramp being an individual peculiarity. The disorder is especially apt to arise in persons of irritable temperament. While cramp has been met with in all ages, sexes, temperaments, and climates, it has been observed that it occurs far more frequently in warm climates than in cold, and chiefly in the hottest of warm climates, and that persons of middle age suffer most from the affection, and men more so than women, and the robust and vigorous more so than the weakly. Neither can there be any doubt that the shock of cold applied to the surface of the body, especially when the body is unduly heated, is the commonest determining cause of the worst and most extensive forms of bathers' cramp. On this fact is founded the common prejudice against bathing when the body is much heated. Many fatal cases have illustrated this point. Only a short time ago, a robust soldier, who was an expert swimmer, rowed in a boat, upon a sultry evening, to a deep pool; here, with his body glowing from muscular exertion, he plunged into the water with the intention of taking a refreshing bath, when he was immediately seized with general muscular cramp, so that the poor fellow was at once drowned. That mere prolongation of muscular exertion, as in continued swimming, and forcible and sudden muscular exertion, particularly in the extension of the extremities, as in swimming with very vigorous and rapid strokes, are, respectively, efficient and frequent determining causes of cramp, familiar experiences to every swimmer. These muscular conditions, however, usually give rise only to the slighter and more localized forms of cramp. Serious cramp is a peril which menaces most persons with highly developed muscles. Its most powerful and most avoidable cause is the sudden immersion of the body, when its surface is highly heated, in water of a relatively low temperature.—*British Medical Journal*, July 14, 1883.

The Absorption of Watery Solutions by the Skin.—From an examination of this subject (*Ann. de Dermatol. et de Syph.*), Dr. Aubert concludes the following: 1. Substances dissolved in water may make their way through the epidermis without producing any visible external lesion. 2. Nevertheless, the essential condition of such penetration appears to be a break in the epidermis where it is prolonged into hair-sheaths, and along the included portions of the hairs themselves. 3. In fact, according to our observations, this penetration takes place exclusively in hairy parts. 4. It is promoted by whatever causes the hair to be pulled about, as, for instance, friction with the moist or dry hand, or unusual size, stiffness, and length of the hairs. 5. A delicate integument and thin cuticle afford unfavorable conditions, on account of the less vigorous growth of hair on parts thus endued. Total absence of hair is likewise a condition eminently unfavorable to absorption. 6. Hence we may infer the possibility of introducing soluble substances into the circulation by causing them to penetrate the epidermis in small quantities, either with or without the aid of baths. To effect this, friction with the palm of the hand would have to be applied forcibly over a large surface, and especially where the skin is hairy. The only possible unpleasant effects would be a moderate degree of inflammation, manifested in a little redness and smarting about the roots of the hairs. 7. Simple immersion in a bath, however prolonged, could not be relied on to effect the entrance of even the smallest quantity of a solution through the skin.

Rectal Examination for Vesical Calculus.—Professor Volkmann states that after the patient is completely anæsthetized one hand should be placed over the pubis, introducing the forefinger of the unoccupied hand into the rectum. In this manner it is easy to grasp a stone with the upper hand, especially in lean subjects. Sometimes it is possible to pass a ligature around the abdominal walls inclosing the stone. In vesical papillomata and myxomata with long pedicles, this ligation might be of use.—*Archiv für Chirurgie.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, August 25, 1883.

THE HYGIENE OF DOG DAYS.

THE oppressive heat of this season is alluded to by Virgil, who ascribes to the baneful influence of Sirius corporal languishment and disease.[1]

How to keep strong and well when the thermometer is 90° in the shade and there is not a breeze, and the atmosphere is full of moisture; when the appetite flags and digestion languishes, and toil is irksome, is the perplexing question.

By common consent for the inhabitants of cities, for all men of business and all professional men, this is the holiday season, and nothing in the economy of nature is more appropriate than that citizens should fly to mountainous regions of the country, or the seaside for coolness, invigorating air, rest, and recreation during this trying period, when the air of our crowded cities is rank with decomposition and corruption.

Not to dwell on the peril to the cerebro-spinal system of excessive heat; and it is a matter of frequent observation that exhaustion of nervous energy, phlegmasias and even death are thereby produced—not to dwell on the relaxation of the muscular system, of the perspiratory system, and the venous congestions which all experience to a greater or less degree, the digestive organs are undoubtedly the most exposed to danger. Over-eating, and the eating of improper food are sins of dog days as of all other periods. A considerable portion of the human race have not self-control when impelled by appetite, and never learn self-control by the dearest bought experience. Green fruits and green vegetables are in the market. There is little desire for ordinary food, but these new products of the soil, though generally immature, are palatable and appetizing. The weakened stomach is oppressed by a burden which it cannot digest, and *embarras gastrique*, enteritis, or cholera morbus results. Happy the summer gourmand if, warned by a diarrhœa, he practises abstinence in time to escape worse evils.

So patent is it to every physician that a large part of the physical ailments of dog days are due to indulgence in green fruit and vegetables, that all citizens—those that stay at home to swelter during the hot weather, and those that frequent the watering-places—cannot be too much cautioned as to the danger of much indulgence in the good things with which their tables, at this season of the year, are loaded. If, as at a medical banquet we once attended, the green corn could be labelled *cholera* the green peas *colic*, and the lobster salad, *despair of a jaded stomach*, only the simple truth would be told, however much it might seem like a stupendous joke. If the appetite be poor, the powers of the stomach are enfeebled, and should not be taxed. Food of an easily digestible character should be eaten, such as stale bread, oatmeal, pure milk (if obtainable), rice, a little fresh fish or *tenderloin*, broiled, not fried, chicken-, veal-, or mutton-tea, with a little soda biscuit, cooked ripe fruits in moderation. Heavy boiled dinners (fit only for the "tough stomachs of reapers"); rich puddings and pastries, salads, green legumes, fried meats, and animal food generally, should be either not indulged in at all, or eaten very sparingly.

Frequent ablutions form an important part of the hygiene of warm weather. The whole body should be bathed with lukewarm water twice daily, and if there be sufficient constitutional vigor to stand a cold bath, this will prove very invigorating.

Will it do to take a cold plunge while perspiring? This question has been answered both negatively and affirmatively. The common impression has been that a bath taken during active perspiration is likely to be injurious; therefore a hygienic rule has been established forbidding cold bathing at such times. This is a rule, however, which is transgressed by laboring men and farmers with impunity, and it is well known that in the European hydrotherapie establishments it is advised as preparative for the cold douche that the patient should take vigorous muscular exercise before the douche, in order to induce sweating; and it is at the period of greatest muscular activity that the cold plunge or douche is taken. It is maintained that the greater the difference between the temperature of the body before the douche and that of the water the more active the reaction will be. It is perhaps safer to follow the traditional opinion; at all events, the cold douche should be short. There is no question that the free external use of cold water is a powerful promoter of tone, and that many a vigorous literary man and accountant owes his robustness during the summer months to regular habits of cold bathing. Sea bathing is especially recommended to those who are in a situation to enjoy this uncomparable hygienic luxury.

The air in dwelling-houses should be made as wholesome as possible, and all ill-smelling nuisances in the vicinity should be speedily abolished. Foul smells may not contain disease-germs, but they certainly offend the respiratory and digestive organs. The windows of sleeping apartments should be kept constantly open.

The daily tasks should be lightened in correspondence with the diminished capacity for hard work; opportunities for recreation should be improved, and sleep should be abundant. An hour of sleep after dinner is invaluable to most hard working men.

Such are some of the hygienic rules applicable to dog days; they will perhaps be less heeded by busy physicians at watering places, to whom, as to farmers, this is a harvest season, than by intelligent citizens generally.

[1] Æneid iii., 141:

Sinquebat, dulcis animas, aut ægra trahebant
Corpora; tunc sterilis exurere Sirius agros.

Also x., 274:

Ille Siteni morbos que ferens mortalibus ægris.

CONCERNING THE VALUE OF EXAMINATIONS.

THOSE who read the very interesting paper by Surgeon Shufeldt in the present issue will be impressed with the truth of much that he says regarding the real value of examinations as tests of knowledge actually possessed. These examinations are, as Huxley very truly remarks, the necessary evils of our existing system of education. But that they utterly fail in very many instances of accomplishing their real purpose goes without the saying. The failure to pass is often due to absolute ignorance on the part of the candidate. When there is no question on this point the examination serves its real purpose. Too often, however, the trouble is with an examining board which adopts too arbitrary a standard, or imposes too exacting conditions. There is great need of drawing the dividing line somewhere between these extremes.

It has often been said with much truth that the prize men in college do not, as a rule, make much of a show in after-life. They belong to a class now becoming quite numerous, who study to pass an examination rather than to gain knowledge. "They do pass, and they don't know." On the other hand, the scholar at the foot of his class, who scrapes through by so-called blind luck, often surprises every one by his ultimate successes. But ordinary examiners never appear to dream of such possibilities, nor are any practical efforts made to ascertain the real extent of that groundwork of knowledge upon which future success in any calling must depend. An approach is made in that direction in the searching character of the Army and Navy examinations, but that is all. It may, and doubtless does, serve to keep out incompetent men, but it cannot always bring to the front and develop those whose best work is ahead of them. That examining board would certainly be a wise one which could, under all circumstances, be able to separate the chaff from the wheat. But while this may be considered impossible it must nevertheless be acknowledged that there is great room for reform regarding the accepted method of examination even in the Army and Navy. There should certainly be an attempt to approach a more practical standard, an endeavor to bring out the qualifications which shall best meet the real requirements of every-day life in camp, on the field, or in hospital. At present there appears to be more danger of shutting out many good men who would be destined to ornament the corps than of admitting ignoramuses who would be liable to be dropped at their second examination.

The second examination is right enough in its place, but its real aim should be to measure the qualification of the candidate according to the bent of his future usefulness to the service. Proficiency in one line of study should offset a lack of it in another. Thus each one could be placed properly to bring out his best talents and be encouraged to pursue a line of study before and after his second examination best suited to his taste and capabilities.

Even Surgeon Bill himself, if subjected to an examination to-day, might pass better in chemistry than either in anatomy or surgery. And yet it would have been quite a mistake to have rejected him on that account. On the other hand, we have not heard that the late Geo. A. Otis, whose masterly "Surgical History of the War of the Rebellion" is a monument of talent and industry, was much of a chemist.

News of the Week.

THE PROGRESS OF YELLOW FEVER.—The appearance of yellow fever among the marines at the Navy Yard, near Pensacola, has given rise to much speculation as to the manner in which the disease found entrance. Nothing definite has yet been ascertained, as those in authority are not disposed to stop to inquire *how it got there* until they have perfected their sanitary arrangements for preventing its spread. At the present writing seven cases are reported to have occurred among them by Dr. Owen, the medical officer in charge. Outside the reservation great activity has been manifested by the health authorities of Pensacola, supplemented by the Marine Hospital Service; immediate steps were taken to quarantine the reservation by land and water by placing a sanitary cordon around the infected camp, thus cutting off all personal communication between the reservation and the outside world. With an efficient quarantine and other sanitary measures it is believed the disease will be confined within its narrow limits. Last week two cases of fever of a suspicious nature, with one death, were reported from Ocean Springs, Miss., a point nearly opposite the Ship Island Quarantine Station. The house in which they occurred was at once disinfected and isolated by a sanitary cordon, and up to the present writing no further appearance of the disease has been reported. Dr. Austin, of New Orleans, regards the cases as very suspicious, but will decide against their being yellow fever if the disease does not spread—a thing not likely to occur if properly guarded by those in charge of the sanitary cordon, etc.

Considerable opposition to the location of the Cape Charles quarantine station, at Fisherman's Island, is still manifested by the Baltimore pilots, notwithstanding the fact that it is more convenient for them than for the Virginia pilots, who have offered no objection whatever, but on the contrary have aided the quarantine officers from the first in bringing foreign ships to anchor opposite the station. A few days since the Governor of Maryland issued an order instructing the Baltimore pilots in this matter, so that their opposition is confined to newspaper attacks instead of overt acts of insubordination as formerly. The station is now in good running order, and all foreign vessels are inspected before being allowed to proceed up the bay. Everything is satisfactory at the other United States quarantine stations; the one at Sapelo, on the coast of Georgia, designed as a place of refuge for infected vessels bound for any port between Charleston, S. C., and St. Augustine, Fla., has as yet had nothing to do.

Consular reports continue to indicate no increase in the fever at foreign ports. At Cardenas, Cuba, but four or five cases, and no deaths, are reported in the town for the week ending August 11th, and "no yellow fever among the shipping." At Matanzas there were four cases and two deaths in the city; none reported in the shipping. Previous reports of yellow fever at Colon (Aspinwall) have been contradicted by the Consul at that place. At Vera Cruz the disease continues in great violence. A cable despatch of the 13th instant states that the steamer Alexandria cleared for New York on

the 11th, and a second despatch, dated the 14th, that the steamer Bernard Hill cleared on that day for Baltimore. A third despatch, dated the 20th, announces the departure, on the 17th, from Vera Cruz of the steamer City of Washington for New York. These steamers will of course be carefully inspected, and quarantined if necessary.

Immediately upon the appearance of yellow fever at Pensacola Navy Yard a large supply of disinfectants and a half-dozen hospital tents were ordered by Surgeon-General Hamilton from the supply on hand at New Orleans. An additional number of tents were asked for by the Pensacola Board of Health, and twenty more sent them on the 21st instant. In order to insure safety a house-to-house inspection of Pensacola was ordered and commenced on the 21st instant. The following despatches from Pensacola and Fortress Monroe to Surgeon-General John B. Hamilton give the latest yellow fever news up to the hour of going to press:

PENSACOLA, FLA., August 20th.—No new cases at the Yard to-day. Pensacola perfectly healthy. Will commence inspection to-morrow. Will give you progress every day. Cordon perfect and under my personal supervision. Has performed good service already; arrested thirteen persons. Cordon seventeen miles long, well protected by swamp and water, and all possible landings guarded. JOHN B. GUTTMAN, President Board of Health.

PENSACOLA, August 20th.—Board of Health request that I ask you to send twenty hospital tents. Reported eight cases and three deaths. J. M. TARBLE, Collector.

PENSACOLA, August 20th.—No new cases at Navy Yard for last forty-eight hours. Eight cases and three deaths reported to date. Villages of Warrenton and Woolsey perfectly healthy. Fever confined to Yard hospital. Surgeon Owen in critical condition. WHITE, Attending Assistant-Surgeon.

FORTRESS MONROE, August 20th.—Spanish steamer Navarra, from Havana and Cienfuegos to Baltimore, in ballast, etc., ordered in quarantine to-day. One suspicious case of fever, rest well. Will detain her several days for developments. HENRY SMITH, Surgeon.

The following brief history of the Norwegian bark Salome, is furnished by Surgeon Henry Smith, of the Marine Hospital Service, in charge of Cape Charles quarantine station: "Norwegian bark Salome, spoken by the Revenue steamer Ewing, off the Capes, August 15th, directed to remain at her anchorage in Lyme Haven Roads until boarded and inspected by United States quarantine surgeon. Was inspected at 6.30 A.M., the 16th, and ordered to quarantine station for observation, disinfection, and fumigation, and to allow no communication whatever until further orders. This vessel left Cardiff, Wales, February 6, 1883, for Vera Cruz, Mexico, with a cargo of patent fuel, arriving there April 25th, with a crew consisting of eleven persons, all on board well. The health of the men remained good until the cargo was discharged, when, on June 10th, ordinary seaman Soren Aslagsen was taken down with yellow fever and died in three days of black vomit. The captain had the fever June 16th, but recovered, and the *entire ship's crew* were taken down in rapid succession. After obtaining ballast, the Salome sailed from Vera Cruz, June 26th, for Galveston, Texas, intending to take on a cargo of cotton-seed cake and oil; was not allowed by the authorities to go beyond the inner quarantine, and ordered to the outer quarantine the next day. She arrived at the Galveston quarantine, July 1st, and the day following M. E. Nielsen, first mate, and brother of the captain, was taken with the fever and died July 4th. A passenger named Guerre, a Frenchman, and of New York, who took passage at Vera Cruz, was attacked July 2d (the same day as the mate), and died July 4th. The last death was that of Ole Tobiasen, a seaman, who was taken sick July 8th, and died July 14th, the day after sailing from Galveston, of black vomit, and was buried in the Gulf of Mexico—making a total of four deaths. . . . An additional unacclimated seaman was shipped at Galveston two days before putting to sea; all were found comparatively well upon arrival of the vessel at the Capes—thirty-one days having elapsed since the last death or case of any kind, the last man shipped having thus far escaped. She was disinfected and fumigated at Galveston. The Salome, which has caused so much anxiety because of her disastrous experience, I believe enjoys the distinction of being the first infected vessel to arrive with yellow fever at our shores in the present year."

THE PROGRESS OF CHOLERA.—But little if any progress has been made in the march of cholera during the past week, and the precautionary measures adopted by various countries, give hope that it may be kept at bay for another year.

A letter to the State Department from the Consul-General of the United States at Lisbon, Portugal, dated July 20, 1883, says: "Certain sanitary measures of a precautionary character have been taken by the Portuguese Government against the introduction of the Asiatic cholera, at this time a fearful epidemic in Egypt. From the 5th of the present month, by a ministerial decree—of which I have the honor to enclose a printed copy—the Egyptian ports of the Mediterranean were declared infected by cholera and all the Red Sea ports were declared suspected. The danger of infection at this port is not great, as Portuguese intercourse with the ports mentioned may be said to be confined to the monthly arrival at Lisbon of a steamer of the British India Company. The Spanish Government has imposed similar vigorous measures upon vessels arriving from the English ports, and a portion of the Madrid press has advised that until similar restrictions are imposed in Portuguese ports upon such vessels, an embargo be laid on all persons entering Spain by land from Portugal. Beyond the measure referred to above, no others have been taken by His Majesty's Government, as far as I am informed by the competent authorities. It is said that concert of action is contemplated by certain of the European powers as regards the continental ports of Central Europe, and that stringent measures are under consideration as regards intercourse with the ports now so painfully affected. The quarantine here is not rigorous, being of seven days only, while vessels from South American ports are subjected to eight days' detention and seclusion."

The following is a translated copy of the "Ministerial Decree" referred to in the foregoing letter:

"In consequence of information received, and in conformity with advice of board of health, all ports of Egypt on the Mediterranean are declared infected with cholera morbus from June 20th last; and also ports of the Red Sea, both Egyptian and Ottoman, are declared suspected. Lisbon, July 5, 1883."

The United States Consul at Copenhagen, Denmark, under date of July 20th, transmits to the State Department the following notice relative to the measures taken against the introduction of contagious diseases in that kingdom:

[*Translation.*]

"Notice is hereby given that the regulations in Second Section I. of the Law relating to measures against the introduction of contagious diseases in the kingdom, of July 2, 1880, will be enforced with regard to ships coming from all parts of Egypt until further notice is given.

"In consequence of information received that the cholera is now prevailing in Egyptian ports, and as this disease seems to have a very considerable circulation, the Regulations in Second Section No. I. of the law relating to measures against the introduction of contagious diseases in the kingdom, of June 2, 1880, will, until further notice, be enforced with regard to ships coming from, or which have been in communication with any of the ports of Egypt, or which may have received persons from, or have had persons on board from such a ship.

"This regulation will be enforced at once, and is herewith brought to the notice of all whom it may concern.

"The Ministry of Justice, July 4, 1883.

"(Signed) J. NELLEMAN."

The United States Consul at Odessa, Russia, in a letter to the State Department—July 10th—says:

"I have the honor to report that from the 13th inst. all vessels arriving at this port are to be subjected to seven days' quarantine, on account of the cholera epidemic now existing in Egypt."

The following is a list of the United States Sanitary Inspectors on duty at foreign ports, with a copy of their instructions:

At Liverpool, England.—William Kelly, M.D., Robert Jones, M.D., J. Oliver, M.D.

At London, England.—Joseph Higham Hill, M.D.

At Vera Cruz, Mexico.—Robert Mainegra, M.D.

At Havana, Cuba.—Daniel M. Burgess, M.D.

Instructions.

The Sanitary Inspector is required to visit and inspect all vessels bound for any port of the United States, and in case of the departure of infected vessels, notification of the same should be transmitted by telegraph in case the vessel is a steamer, and by mail if a sailing vessel; he will be governed in sending cable despatches by the rules for the same herewith enclosed (being an abbreviated or cipher message); he will make an abstract, weekly, of all bills of health issued at his port of all vessels bound to the United States. This report shall show the name, rig, and nationality of vessel, date of sailing, number of the crew, number of passengers, condition of crew, condition of passengers, present sanitary condition of the vessel, previous sanitary condition of vessel, and sanitary condition of the port.

All infected ships should be instructed to put in at Ship Island or Sapelo Refuge Station before proceeding to their port of destination in the United States, thereby saving detention, as they will be sent there by the health officer of any Southern port they may attempt to enter.

The object of the inspection is to keep the Surgeon-General of the Marine Hospital Service informed of the departure of infected vessels for the United States, in order that he may notify the port of destination of the probable time of arrival of such vessel, so that precautionary measures may be taken to prevent the introduction of contagious or infectious diseases.

Every effort should be made to keep thoroughly informed of the sanitary condition of the port, and notify the Surgeon-General, without delay, of any danger that may be apparent.

SANITARY CONDITION OF WASHINGTON, D. C.—The health officer of Washington, Dr. Smith Townshend, has made a request of the District Commissioners to expend $500 in placing the city in a good sanitary condition. Although Washington looks clean with its wide streets and beautiful parks, there are not a few by-ways and vacant lots which are teeming with filth, and need the attention of a sanitary inspector.

THE POST-MORTEM EXAMINATION OF THE LATE JACOB S. MOSHER, OF ALBANY.—The autopsy on the late Professor Mosher was held by Drs. Samuel B. Ward, Albert Vanderveer, N. L. Snow, John B. Stonehouse, William Hailes, Jr., Willis G. Tucker, and Maurice J. Lewi, coroner's physician. The result was announced as follows: "We, the physicians who were present at the autopsy on the body of the late Dr. Jacob S. Mosher, are unanimously of the opinion that death resulted from heart failure, the consequence of degeneration of the coronary arteries, and of acute endocarditis." The further opinion of the physicians is that the disease was of probably not more than ten days' duration, and was probably caused by overwork. Death was instantaneous and painless. The brain weighed a little over fifty-nine ounces, a very unusual weight. The gray matter, the residence, so to say, of the mental powers, was extraordinarily abundant. All the other organs were in an excellent state of preservation.

AMERICAN DERMATOLOGICAL ASSOCIATION.—The seventh annual meeting will be held at the Sagamore House, Green Island, Lake George, on Wednesday, Thursday, and Friday, August 29th, 30th, and 31st. Papers will be read by the following gentlemen: Dr. Piffard, "Treatment of Acne;" Dr. Hyde, "A Study of the Coincidence of Syphilitic and Non-Syphilitic Affections of the Skin;" Dr. Graham, "General Exfoliative Dermatitis;" Dr. Stelwagon, "Impetigo Contagiosa;" Dr. Robinson, "Alopecia Areata;" Dr. Duhring, (1) "On the Value of a Lotion of Sulphide of Zinc in the Treatment of Lupus Erythematosus," (2) "Report of a Case of Ainhum with Microscopic Examination;" Dr. Atkinson, "A Case of Multiple Cachectic Ulceration;" Dr. Sherwell, (1) "Pseudo-Psoriasis of the Palm," (2) "Malignant Papillary Dermatitis;" Dr. Bulkley, (1) "A Hitherto Undescribed Vegetable Parasite Found on the Human Skin," (2) "A Clinical and Experimental Study on Pruritus;" Dr. Van Harlingen, "Experiments in the Use of Naphthol."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 13, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. V. P. GIBNEY presented, in behalf of a candidate, a specimen of

BILATERAL CONGENITAL DISLOCATION OF THE HIP ASSOCIATED WITH SPINA BIFIDA.

DR. B. A. WATSON presented a specimen of

PRIMARY SCIRRHOUS CARCINOMA INVOLVING THE RIBS, ADJACENT CONNECTIVE AND MUSCULAR TISSUES, THE PERICARDIUM, AND THE HEART-WALL.

He was enabled to present this specimen by the courtesy of Dr. Walter Rae, of Jersey City, who attended the patient during the latter part of his illness, and supplied the following history: Michael E. S——, thirty-six years of age; born in Ireland; laborer; healthy man of erratic and somewhat dissipated habits. The patient informed Dr. Rae that during the epidemic of yellow fever which prevailed in Memphis in 1873 he was living in and unable to escape from the pest-afflicted district. He further adds, "I did not expect to survive this epidemic, and consequently during its continuance I was constantly drunk and frequently imbued with other vices." He gives a vague and unsatisfactory history of a supposed chancre, followed by some inflammation of the inguinal glands, from which he thinks he suffered during this period; and although no treatment was employed there has been a complete absence of any cutaneous complications or other tertiary symptoms. With the disappearance of the epidemic we are informed that Mr. S—— abandoned his protracted spree, although he continued the daily use of alcoholic stimulants, but in such a quantity as to rarely produce intoxication. He began to complain in the early spring of 1882 of a sharp intermittent pain, which he located in the heart. This pain gradually increased in severity and frequency, and was soon supplemented by a slight dyspnœa. Both the pain and dyspnœa were frequently excited and always intensified by physical exertion. The disease had progressed with so much rapidity, that he found himself compelled, in the early part of the ensuing August, to abandon the performance of all labor. The pain, at the commencement of the illness was principally felt in the cardiac region, but it gradually ascended, until just previous to the death of the patient it was located in the left shoulder and upper portion of the humerus. The pain, which had been previously intermittent, became about December 1st continuous, and was described by the patient as being of a "pulling or dragging character." There was observed about the same time some unusual prominence of the upper portion of the sternum, which continued to increase uutil the fatal termination of the disease. The cough, which heretofore had been slight, became at this time so troublesome that the patient sought relief in the use of medicine. There was no important change noted in our patient's symptoms, although he was gradually becoming weaker, until about February 1, 1883, when it was observed that anasarca had made its appearance in the feet and ankles, which soon extended to the legs, thighs, scrotum, abdomen, etc. The lower extremities soon became so much distended that it was thought proper to freely incise the integument, which operation was followed by a profuse flow of serum. The patient had been unable to sleep in the recumbent position for two weeks prior to the making of these incisions, but subsequently he was able to resume the ordinary postures and secure the much-required rest. There appeared soon after this a severe pain in the left popliteal space, which continued some time, and seemed to be neuralgic in character and reflex in its origin. The left upper extremity is now œdematous, although the right is normal. The relative conditions of these parts remained the same during the life of the patient. During the last three weeks of life the patient suffered from a profuse prune-juice or bloody expectoration. The autopsy was made thirty-six hours after death. The rigor mortis marked; considerable general emaciation; left upper extremity œdematous; right side of the chest is flattened laterally; bulging anteriorly of the upper portion of the sternum and thorax; this tumor is trapezoidal in shape; involves the upper portion of the sternum; extends slightly above its superior border, downward from this point three and one-half inches; its breadth is also three and one-half inches in the upper part and two inches at the lower border; it covers one inch of the sternal portion of the left clavicle and extends above the same half an inch; the right sterno-clavicular articulation is barely covered with this morbid growth; bones within the tumor are diseased and the integument covering it is perfectly healthy. The right lung contains a large abscess and is much broken down, with pleuritic adhesions over its entire surface. The liver, kidneys, stomach, and spleen are healthy.

The morbid growths were referred to Dr. William H. Welch, of Bellevue Hospital Medical College, for examination, who reports as follows: "The specimen consists of a lung [left], the heart, and a portion of the thoracic wall with the ribs. The lung shows a few spots of bronchopneumonia, a small hemorrhagic infarction in its anterior border, emphysema of moderate extent along its borders, old pleuritic adhesions, and moderate hypostatic œdema and congestion. There are a few small nodules in the periphery of the lung, which may possibly be small, secondary, cancerous nodules, although they appear more like pneumonic foci. The specimen is not sufficiently hardened to obtain satisfactory sections to determine this. The external surface of the heart presents in various places diffuse and nodular yellowish-white growths, which, in places, have invaded the muscular substances of the heart nearly to the endocardium. The most extensive of these growths surrounds the large vessels at the base of the heart, particularly anteriorly and to the right. This growth extends down so as to have invaded deeply the right border of the heart and the posterior wall of the left ventricle. At the apex of the heart is a nodule about an inch and a half in diameter. There are other nodules over the surface and in the muscular substance of the heart. The valves are not abnormal, except a little atheroma of the aortic and mitral valves. The microscopical examination of the new growths of the heart reveals a stroma of fibrous tissue enclosing alveolar spaces filled with epithelial-like cells. The structure is that of carcinoma. The adjacent muscular tissue is fatty. The portion of the chest-wall, including the bone, is infiltrated with the same kind of new growth as that involving the heart."

The diagnosis, made by Dr. Welch, constitutes the title of this paper, while the chief interest of this specimen is found in the infrequency of the occurrence of primary cancer in these organs, and the extreme difficulty with which the nature of the disease is determined before an autopsy is made. It would unquestionably be very interesting to determine (if it were possible) the point at which this disease originated before we alluded to the literature of this subject; but I fear it cannot be done in this case with either satisfaction or certainty. It is nevertheless thought that the history in this instance justifies the exclusion of the question of the origin of the disease within the bones or soft tissues of the thoracic wall. In the first stage of the disease the patient complained of a pain which he located below and to the inner side of the left nipple. The first physicians to whom he applied, and some of this number are justly regarded as eminent men in their profession, observed functional disturbances of the heart and various

morbid sounds, which caused them, without an exception, to diagnose aneurism. The swelling and pain which finally appeared in the upper part of the sternum belongs to a later stage of the disease. The origin of this disease may therefore have been in the mediastinum, pericardium, or heart-wall; but neither the specimen nor history enables us to fix it more definitely, notwithstanding the chief morbid deposits are found in the heart. The relative infrequency with which this disease occurs in the heart may be inferred from the following:[1] "Thus in Kohler, in 9,118 autopsies, and in Tanchon, in 8,289 autopsies, cancer of the heart was observed six times by each; in Willigk, in 4,547 autopsies (of these 477 cases of carcinoma), cancer of the heart was observed nine times, and of the pericardium seven times. Most frequently carcinoma of the heart is secondary, either developed by extension from neighboring organs (mediastinum, œsophagus, etc.) or occurring as a metastatic deposit, and here frequently following the course of the vein; thus we may see it extending from the lung along the pulmonary veins into the left auricle, or along the venæ cavæ into the right auricle." Neimeyer[2] says: "Cancer of the heart is very rare, occurring only in general cancerous infection, or by extension from the mediastinum or pericardium. It forms circumscribed tumors, usually of the medullary, or else of the melanotic kind, which project either inward or outward, and may sprout into the cavity of the organ." Dr. Thomas B. Peacock says:[3] "Cancerous deposits in the heart are of more common occurrence than tubercle. Dr. Walshe, writing in 1846, says that he had readily found twenty-five cases recorded; and more recently, in a paper in the 'Pathological Transactions,' I collected the particulars of forty-five, including in this number two which had fallen under my own notice. The earliest published examples of the disease were, I believe, those of Andral and Bayle, in 1824." Delafield says:[4] "Carcinoma of the heart as a primary tumor is very rare. Nodules secondary to growths in the mediastinum or other regions are more common."

Dr. W. M. Carpenter remarked, with reference to Peacock's statement that "cancerous deposits in the heart are of more common occurrence than tubercle," that so far as tubercle was concerned, he had seen at the autopsy room at Bellevue Hospital, several cases of general miliary tuberculosis in adults, during the last winter, and almost without exception miliary tubercles existed in either the pericardium or the endocardium or both, and in nearly as large proportion of the cases in the cardiac muscle. He had not observed secondary cancerous growth with anything like the same frequency in the heart.

Dr. C. A. Leale presented specimens of

CHRONIC DYSENTERY CAUSED BY THE IRRITATION FROM AN ACCUMULATION OF BONES AND NUTSHELLS LODGED IN AN ABNORMAL DIVERTICULUM AT THE LOWER END OF THE SIGMOID FLEXURE OF THE COLON, WITH ULCERATIONS AT THE SEAT OF IRRITATION, WHICH CAUSED THE LADY TO BE AN INVALID FOR OVER THIRTEEN YEARS—RECOVERY AFTER THE REMOVAL OF THE SOURCES OF THE IRRITATION AND HEALING OF THE ULCERATIONS,

with the following history: Mrs. M——, aged twenty-six years, was in perfect health until thirteen years ago, when her father purchased a house in one of the most expensive parts of New York City, and lived there before the neighborhood had been built. It was subsequently found that the previous occupants had left in consequence of frequent outbreaks of malarial fevers, the endemic character of which soon became manifest in the family of Mrs. M——, causing hepatic and other chronic troubles never to be fully recovered from. At that time Mrs. M—— had a low form of fever for nearly a year, and only partially convalesced after a change of residence. The structural change in the liver had left an obstructive circulation of the veins emptying into the portal, and whenever constipation occurred she suffered from local venous congestions and peripheral nervous irritations of the uterus, vagina, and rectum, and pains along the courses of the crural and sciatic nerves. A year after marriage she was delivered of a feeble child, with open foramen ovale, which died in three days. After a tedious convalescence she again conceived, passed nine months of great discomfort and exhaustion in consequence of her stomach and liver trouble, but at term gave birth to a large, perfect child. Last summer while at the sea-side she had a return of her dysentery, causing great depression, and although occasionally checked temporarily, it would reappear without any known provoking cause. The dysentery lasted until April 5, 1883, when, after having had twenty-eight movements in the previous twenty-four hours, she sank in a collapse so nearly fatal that restoration only followed after the most vigorous efforts, by lowering the head below the pelvis to send all the blood possible to the brain, by thoroughly washing out the bowels with warm water to free the ulcerations of the colon from all irritating mucus, then following by rectal alimentations of beef-extract, brandy, chicken-broth, and hot water, while nothing was given by the stomach. These procedures soon caused the patient to be out of immediate danger, the passages from the bowels to be checked, the vomiting to cease, and a rapid gain in strength. The rectal alimentation and hot water soon supplied the necessary nutriment, while the irritable stomach was prepared for digestion by copious draughts of warm water, to be vomited until it was well freed from the accumulated tenacious mucus contained in the stomach. To relieve the probable ulcerations finely powdered willow charcoal was given in teaspoonful doses to a gill of water thrice daily. The rapid increase of strength in a week enabled the patient to digest light diet when given by the mouth, and the improvement continued until fæces accumulated in the rectum and caused a return of the old neuralgic pains along the course of the nerves leading from the sacral plexus. These pains were particularly increased in severity just before a movement, as the fæces passed the posterior rectal walls; after each movement from the bowels or passage of rectal douche, the tenesmus and pain were so severe that for an hour it was almost unendurable. There was also a pain situated at the upper part of the rectum which Mrs. M—— described as her old pain in the back, of years' duration, and which had been so annoying as to prevent walking with ease, or even riding in the most comfortable carriage. This pain in the back, Mrs. M—— stated, for years had been exceedingly severe after any jolting, so much so that, although in apparent health otherwise, she was forced to renounce all such pleasures.

The general symptoms with the painful fissures of the anus caused him to suspect chronic ulceration of the alimentary canal, probably of a tuberculous character, and that several of the ulcerations at the colon were below the sigmoid flexure, where under an anæsthetic they might easily be brought into view. He therefore proposed that so soon as strength would permit a thorough examination be made, which was done on the 11th of May, when the painful fissure of the anus and ulcerated rectal lacuna, with a large varicose ulceration four inches up, were thoroughly cleansed of tenacious mucus and gently touched with pure nitric acid. The serrated ulcerated edges of the remnants of the hymen were dissected off, and dilatation of the meatus urinarius effected to remove the exposed peripheral nerves. He dilated the os uteri and cleansed out the tenacious mucus, then gently applied nitric acid to the cavity. After neutralizing all excess of acid with the bicarbonate of soda, and washing off the external parts with warm water, and emptying the bladder, she easily came from

[1] Ziemssen's Cyclopædia of the Practice of Medicine, vol. vi., p. 287 et seq.
[2] Neimeyer's Text-book of Practical Medicine. Translated from the Eighth Edition by Drs. Humphrey and Hackley.
[3] Reynolds' System of Medicine, vol. iv., p. 169, 1877.
[4] Post-Mortem Exs. and Morbid Anatomy, p. 113.

under the influence of ether. Half a grain of morphine was given, and to the external parts warm water dressings were applied.

On the following and several successive days we were very much disappointed to find that the old pain in the rectum and left iliac region had rather increased than otherwise; the urine was drawn off for a few days by catheter. All pain except that in the rectum and back had entirely disappeared on the fifth day, when dysentery again reappeared, accompanied with pain exceedingly severe and running from the cæcum down the thigh along the course of the sciatic nerve. On the 18th he visited her, prepared to give the anæsthetic to further examine and see the result of former treatment, but her great depression and weakness from the continued dysentery caused a postponement until the following day, May 19th, when ether was again given, and all the ulcerated parts previously treated were found to be in a good condition, enabling him to make a more extended examination up the colon. The largest size duck-bill and cylindrical speculums were each used and all parts exposed to view. Above the varicose ulcerations were found in a healthy condition. Thinking that he had not reached the point of pain continuing after the first operation, he thoroughly dilated the anus, drew down the rectum, and after digital dilatation of its walls, passed up to the lower part of the sigmoid flexure, when he entered a cul-de-sac about two inches in depth, *into which he passed his forefinger*, and came in contact with several sharp, hard foreign masses lodged in the cavity. This cavity proved to be an artificially formed diverticulum at the lower end of the sigmoid flexure, and contained one bone an inch in length and five other irregular-shaped bones, one being triangular, having exceedingly sharp cutting edges. There were also other small foreign masses. All these were easily removed after dilating the mouth of the diverticulum, and are presented to the Society this evening.

The three larger bones he found, thanks to Professor W. K. Parker, F.R.C.S., London, to be the radius and bones of the manus, and the sharp triangular bone of the digit of a bird of the size of a quail ("Encyclop. Brit.," ninth ed.). As Mrs. M—— stated that she had not eaten birds for months, and as the pain in the back had been of years' duration, and entirely ceased after their removal, he surmised that these bones had been arrested at a weak ulcerated part of the bowels when she had her original fever and diarrhœa, thirteen years before; that from the frequent straining this diverticulum had formed at the inferior end of the sigmoid flexure, where a normal pouching exists, and by the tension had increased; that these bones had been the sources of irritation, and were prevented from being extruded by a subsequent and partial invagination of the bowel above, and were the cause of the dysentery. These conclusions are strongly fortified when we consider that the original pain in the back and colon neuralgia and the tenesmus entirely disappeared after the removal of the sources of irritation.

Dr. Leale also presented three

AXILLARY GLANDS,

which he had removed from a patient from whom he removed a cancerous breast one year ago, and the wound healed entirely. This woman nursed a patient from whom he removed a cancerous breast three years ago. At the time she nursed the lady she had no trouble whatever with her breasts, but about two years afterward the scirrhus developed and was removed.

Dr. F. N. Otis presented a specimen of phosphatic calculus removed by lithotrity, and used Bigelow's evacuating apparatus with a great deal of satisfaction so far as results were concerned. It had occurred to him, however, that if a less expensive instrument could be devised, which was efficient, it might and would be acceptable. He did not think that Bigelow's instrument could be improved. But after spending considerable time with a view to improving Clover's instrument, the idea occurred to him that an instrument acting on the same principle as Bigelow's might be constructed somewhat differently, be of much smaller size and less expensive. The result of his labor had been

AN EVACUATING INSTRUMENT WITH AN INDEPENDENT AIR-CHAMBER,

which he had used experimentally with great satisfaction. [It was exhibited to the Society.]

Dr. Otis also presented one entire skull and a part of another, sent to him from the Army Medical Museum at Washington for an opinion concerning the nature of the disease that could have produced the manifest localized loss of bony tissue. There was evidence of loss of the diploë *without* any loss of the external table, a simple sinking in of the external table, leaving apparent elevations with alternating depressions, which is not found with any disease other than syphilis.

Dr. Leale remarked that it would be interesting to know from whence the bones came, as they might aid in solving the question of Dr. Jones concerning the existence of syphilis in this country before the advent of the white man.

Dr. Otis was of the opinion that most, if not all of the prehistoric syphilis would turn out rather fanciful.

Dr. L. Emmett Holt presented a specimen of

INTUSSUSCEPTION,

with the following history:

A plump well-nourished child, aged two and a half months, was brought to his dispensary clinic on Monday, June 11, 1883. The child, the mother stated, had been quite well until Sunday evening. The bowels had been regular, and she had given it nothing but the breast. She had partaken herself quite freely of cabbage at noon, and to this in part she attributed the child's indisposition. It was taken at first with vomiting, which had continued ever since; first the contents of the stomach and afterward a thin greenish fluid was ejected. The child was restless during the night, nursed but a few moments at a time, and slept very little. She had during the day, Monday, four quite large stools, which consisted principally of blood mixed with a little mucus. Straining and pain seemed to accompany the movements. On examination he found the child rather drowsy and listless; the clothing was stained with the greenish fluid she had been vomiting all day. The prostration was not specially marked. The rectal temperature was 103½° F. Unfortunately the examination of the abdomen was not recorded, if indeed one was made. The case was regarded as one of dysentery with a considerable amount of gastritis, and simple remedies were prescribed. He directed the mother, however, to report to him the following morning. She did not do so, and the case had quite passed out of his mind, when she came in on Thursday for a death-certificate, saying that the child had died early Wednesday afternoon.

She gave the following account of the case after her visit to the dispensary: The vomiting persisted up to the morning of the day of her death. For nearly twenty-four hours before, the vomited matters were of a brownish color and had a very bad, but not a fecal odor. After Tuesday morning absolutely nothing passed the bowels. The abdomen became very rapidly distended with gas; and the extremities cold. The child was restless, tossing from side to side much of the time. On Tuesday evening it was taken with a convulsion, which was repeated during the night. The following day the child died in convulsions after an illness of a little more than sixty hours. No other medical advice was sought.

From the history given he made a diagnosis of undoubted intussusception and refused to grant a certificate without an autopsy, which was finally permitted. As nothing bearing upon the case was found in the other organs

he confined himself to the examination of the abdomen. Before opening this, careful exploration was made by palpation to discover, if possible, any tumor. From the great tympanites it was out of the question. On opening the cavity the small intestines, distended with gas to a size equal to that in a healthy adult, filled the wound. A small amount of reddish serum was found in the peritoneal cavity without odor, perhaps a couple of ounces in all. The lower part of the large intestine was empty and following this up he found, a little to the right of the spine and lying quite closely against it, in about the region of the hepatic flexure of the colon a tumor about two inches long and one inch in width. The tumor was tightly held down by the mesentery. The intestine was healthy in its external appearance, not even showing much congestion. No evidence of peritonitis was discovered. The tumor after removal was found to be perfectly solid to the touch. An unsuccessful attempt was made to force water through the obstruction from both directions. The distal extremity of the tumor was rounded, and showed a slit-like opening a little to one side of the middle. This was believed to be the ileo-cæcal valve, as was afterward demonstrated. A probe was passed without much difficulty through the whole tumor, entering this opening. No orifice corresponding to the vermiform appendix could be found. The intussusception was exceedingly tight. A traction force of several pounds was required for its reduction, and some of the longitudinal muscular bands gave way before complete reduction was accomplished. The invagination began at the ileo-cæcal valve, about two inches of the ileum passed through this into the cæcum, which itself then was invaginated into the colon and then the colon into itself. The invaginated part then was composed of two inches of ileum, the cæcum, and six inches of the colon.

One point of interest attaching to the case is the age of the child. Of somewhat over ninety cases of intussusception reported by Smith and West only three occurred in the first three months of life. From three to twelve months is the most frequent period. Nearly one-half their cases occurred between those ages.

The small size and the somewhat unusual position would have made the diagnosis of the tumor somewhat difficult, even before the great tympanites developed. The general symptoms, however, were so characteristic as to leave no room for doubt as to the nature of the lesion. From the difficulty experienced in the reduction post mortem it would appear that injections during life would not have been likely to succeed.

Dr. Leale referred to an autopsy which he made on the body of a child less than *one month* old, in which a similar condition was present, induced apparently by a dose of castor oil.

The Society then went into executive session.

Antihelios. — Dr. MacCormac, of Belfast, has recently written a short article with the above title. Having called attention to the unexplained immunity from sunstroke enjoyed by Hindoos and Africans the writer proceeds to make what he apparently believes to be an original suggestion. Although the cooling of heated air supplied to chambers is no new thing, yet we cannot but re-echo the suggestion made by the writer mentioned. By mechanical power the hot air of tropical climates might be drawn through ice chambers or other cooling apparatus, and then sent into the dwelling apartments, workshops, barracks, tents, hospitals, factories, churches, assembly-rooms, and sick-rooms. Wind, water, steam, hand, or Mouchot's sun-engine might each find its appropriate application under different circumstances. Dr. MacCormac regards such an arrangement as more thorough and enjoyable than the tatties and punkahs of India. The importance of temperance in food and drink is wisely insisted upon; without this, coolness would not suffice to prevent the effects of intense heat.—*Lancet.*

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 1, 1883.

Beverley Robinson, M.D., President pro tem. in the Chair.

Dr. V. P. Gibney read the history of a

CASE OF COSTO-VERTEBRAL PERIOSTITIS, DORSAL REGION, TRAUMATIC.

The speaker said: The case I am about to present furnishes some interesting points from a diagnostic point of view. Such cases I believe to be rare, and hence my excuse for placing it on record. Often a vertebral ostitis (called by one or two authorities in orthopedic surgery with remarkable persistency a *spondylitis*) develops in a child and a fall or sprain is reported as arising from trauma—it doesn't make any difference how long the interval. To find, I think, one of these chronic bone-lesions, central in its incipiency, following *closely* upon an injury, is certainly, in my own experience, very rare. Acute peripheral lesions I do find, and the connection between cause and effect is quite close.

The little girl whose case forms the text for these remarks is nine years of age, and she came under my observation on January 24, 1883. She was decidedly nervous, and from the general bearing of her mother I concluded that she was entitled to this diathesis.

Her complaining for the past four weeks had had the spine as the objective point. On examination I found a small cyst-like body, not any larger than a split peanut, lying over the transverse process of the eleventh dorsal vertebra, left side, and to all appearances overlapping the articular end of the tubercle of the rib. This small tumor was sessile, was subtegumentary, and was connected, I believe, to the periosteum. The soft tissues immediately adjoining were infiltrated to a moderate extent, and the localized tenderness was quite marked.

The patient stooped very awkwardly and I began to suspect some disease in the body of the vertebra. There was no tenderness on concussion, and the spinous process did not participate in the deformity.

The history enabled me, apart from the signs, to eliminate any chronic bone disease in the diagnosis. While in perfect health she experienced one day, four weeks before this visit, a pain in her back while lifting her elder sister. She remained in bed next day, so much soreness did she feel, and kept her bed for one week. The pain was very acute at times, especially on movement.

One of my assistants, in whose opinion I always place much confidence, leaned to ostitis of rather an acute nature, and I determined to apply an apparatus as a matter of precaution. Pending the making of the same I ordered a counter-irritant and put on a roller with cotton-wool beneath.

On February 20th I find that it feels and looks more cyst-like and a hypodermic needle is introduced for exploration. This little operation is unsatisfactory, on account of the fright of the girl, and I get only a little blood and lose the patient's confidence.

When I saw her again it was March 31st. An abscess had formed in the meanwhile, had opened, and there was now a small sero-purulent discharge therefrom. The brace was removed and a poultice was ordered.

On April 11th the opening was larger, and through it protruded a mass of granulation tissue which required a caustic.

On the 17th I found projecting through the opening, a small shell of bone, evidently exfoliated from the tubercular process or the rib.

The subsequent history is briefly told. The ulcer healed in a few days. I kept her under observation a couple of weeks longer, and finding a complete cessation of all signs and symptoms, discharged the case.

Dr. Henry F. Walker read a paper entitled

A CASE OF IMPERFECT DEVELOPMENT OF THE PARIETAL BONES OF AN INFANT.

The speaker said: In January, 1883, I attended a primipara in confinement. She was the wife of a man of good physique, but was herself frail and of a very nervous temperament. Neither parent gave history of previous illness or marked diathesis. The labor was prolonged but perfectly natural, and completed without assistance. The caput succedaneum was quite prominent on the vertex to the child's right. It was rather larger than usual, but not larger than one sees without anxiety. I assured the mother that in a few days the child's head would assume a normal form.

On my subsequent daily visits the child was usually sleeping, lying on the back, and was not disturbed. Ten days after its birth the nurse said that the mother was worried because the child's head still showed marked deformity. I then examined it carefully and found that the parietal bones were imperfectly developed. The sagittal suture and the sutures between each parietal and the occipital bone were as perfect as usual, and the fontanel was not of unusual size. But parallel to the sagittal suture in each parietal bone, about three-fourths of an inch from the median line, was a space where the only covering of the brain seemed to be fleshy tissues. This allowed a protuberance of the cranial contents. The tumor on each side was three inches long vertically, the left was three-fourths of an inch and the right one inch wide, while the projection above the general surface was nearly half an inch. The bordering edges of bone could be easily determined, while the firm bone uniting in the sagittal suture and which divided the spaces could be clearly felt. The child was born at full term and no occasion for arrest of development could be found.

I gave a guarded prognosis. While I continued in daily attendance on the mother no change was perceptible. Two months afterward I was asked to inspect and pronounce upon the child's condition. I found that the bony formation on the right side was nearly perfect. The head was a little protuberant there, but the bony case was quite firm and resistant, though evidently thinner toward its centre. The smaller space, that on the left, was completely filled. The bone, however, had here united at an acute angle, making a sharply defined ridge three-eighths of an inch in height above the general surface. Had it not been for this ridge, the absolute proof of the correctness of the original diagnosis, I might have been inclined to think that I had mistaken double hæmatoma for the tumor from non-developed bones. But the bony ridge seemed to me proof positive of the correctness of my first opinion.

At three months the child was well, though with a head of slightly peculiar form.

In response to the query whether the condition might not have been a hæmatoma, Dr. Walker said that he had had that possibility in mind all the time, and the evidence seemed to him conclusive that it was not one.

Dr. F. P. Kinnicutt reported a

CASE OF DIABETIC COMA.

[This will appear later in The Record.]

Dr. H. F. Walker said that a few years ago he had a case in which albuminuria and glycosuria seemed to alternate. The patient finally died of Bright's disease.

Dr. Kinnicutt said that he had recently observed another case of diabetes in which the

NERVOUS SYMPTOMS

were very marked. The patient was a lady who had had the disease for seven or eight years. During that time she had frequently had attacks of paresis involving different portions of the body. She had first three successive attacks of facial paralysis. The first attack developed very suddenly with no other symptoms and the paralysis seemed to be peripheral, since the muscles in the upper part of the face were affected as much as those in the lower. The symptoms lasted for only about a week when they disappeared almost entirely. A few weeks later a facial paralysis on the other side of the face appeared. This also rapidly improved, and was followed by a third attack. A short time ago, without any warning, she suddenly developed a left hemiplegia affecting both the upper and lower extremities and face in a very marked degree. This did not improve; it lasted about ten days, when the patient suddenly had an attack of syncope and died. She was a very large person with, probably, a fatty heart. Referring to the subject of diabetic coma, he said that as to

PREVENTION

it is well known that the attacks are more apt to occur after great physical exertion. Patients sometimes develop them after being brought to a hospital from a long distance. They also occur when the sugar has fallen in amount.

Dr. McBride said that he had not seen any case of diabetic coma, but he should be very much inclined to make use of

VENESECTION WITH ARTERIAL TRANSFUSION.

He had seen such brilliant success with this method occurring in coma from poisoning by illuminating gas that he felt great confidence in its efficacy in diabetic coma. With the perfection now obtained in the technique of transfusion, especially arterial transfusion, the operation is almost entirely devoid of danger, and is one which every physician should be able to perform.

Dr. Kinnicutt said that he had tried transfusion, although it had not been preceded by venesection.

Dr. McBride thought venesection should first be practised. Arterial transfusion was preferable because it was less dangerous. The radial artery is usually selected and the blood transfused *toward the heart*. In cases where the blood has been transfused toward the periphery thrombi have resulted.

Dr. C. L. Dana reported his experience with

PARALDEHYDE AS A HYPNOTIC AND ANODYNE.

The introduction of paraldehyde by Cerville, of Palermo, and its use by Morselli, of Turin, and others was referred to. A specimen of the drug was shown. It is a transparent colorless liquid, with a penetrating odor and taste, suggesting Hoffman's anodyne. Its formula is $C_6H_{12}O_3$. It dissolves slightly in water, but mixes with it very readily. Dr. Dana had been unable to procure any in the city, and it was made for him out of Merck's aldehyde, by Dr. Chevaillier, Lecturer on Chemistry at the Woman's Medical College of the New York Infirmary.

He first tried it on a pup six months old, giving it a gramme by the mouth. The animal was at first much excited, running around and stumbling as if intoxicated. It showed no signs of pain or gastric disturbance. Its intelligence was not greatly disturbed; it would come when called. Pulse ran up from 130 to 200; respiration was 20 to 24 and labored. In about twenty minutes it lay down and went to sleep. Pulse, 140; respiration, slower (18), and with labored inspiration. The animal was easily roused, walked around, then went to sleep again. Slept about two hours.

Having demonstrated its innocuousness, the drug was prescribed in a number of cases. Notes were given of thirteen; nine times it was given for insomnia, twice for its general sedative effects, twice as an anodyne in neuralgia. In six cases it acted very well as a hypnotic, in two it was helpful, in one it failed. Large doses (*i.e.*, above three grammes) were not prescribed. Given in sciatica and supraorbital neuralgia it caused relief of pain temporarily. As a general sedative in "nervousness" it acted remarkably well in one case, and gave

some relief in the other. The dose was 3 ss. to 3 j. well diluted; there were no bad after-effects.

Dr. Dana thought that it was a somewhat less sure and powerful hypnotic than chloral. It was also more disagreeable to the taste. It had the advantage of being safe, of having no bad after-effects. It would probably prove useful in those cases where chloral fails, or is for any reason contra-indicated. At present it is rather expensive.

Dr. McBride asked what were the objections to chloral.

Dr. Dana said that chloral was not without danger; that it was disagreeable, and that some persons could not take it. In fact, he had investigated the value of paraldehyde largely because he had a patient who had attacks of insomnia. Chloral produced sleep, but made him sick all the next day. Bromide of potassium kept him awake unless used in large, long-continued doses.

Dr. McBride thought that chloral could be used with greater freedom than had been supposed. He had given it in pneumonia with dilatation of the heart in doses of one hundred and sixty grains in twenty-four hours (with digitalis), and he had lost in a great measure the dread which he had had of its evil effects. He usually gave it, if indicated, in typhoid cases. In some obstinate cases of insomnia, chloral in doses of five grains with 3 ss. of bicarbonate of soda (as suggested by Mitchell), was often successful.

Dr. Kinnicutt had given one hundred and twenty to one hundred and forty grains of chloral a day to a boy of fourteen, suffering from a very violent chorea.

Dr. McBride had used chloral hypodermically several times in convulsions, and it seemed to him to be the remedy for convulsions. He used a solution of one part chloral to four parts water, injecting a syringeful. It had never produced any abscess. The speaker had also found

SMALL DOSES OF CHLORAL IN URÆMIC DYSPNŒA

very efficient. Three to five doses generally secured relief. He had found it even better than morphine.

Correspondence.

OUR CANADA LETTER.

(From our Special Correspondent.)

MEDICAL SCHOOLS FOR WOMEN—PROVINCIAL BOARD OF HEALTH FOR ONTARIO—SUMMER SESSIONS—QUACKERY IN MEDICINE.

Toronto, Canada.

For some time there has been a good deal of agitation in favor of medical colleges for women. This has grown out of what is called the Kingston trouble. During the session of last winter several ladies were attending the medical school in Kingston. Exception was taken by those ladies to some remarks made by the lecturer on physiology. The men in the class became noisy and made statements that greatly offended the ladies. For some time the work of the school was at a standstill. The students threatened to leave the school. After some negotiations between the students and professors the matter was adjusted by the latter agreeing to give separate instructions to the men and women. This difficulty made it apparent that co-education would not work, and so both Kingston and Toronto are on the eve of organizing a college for the fair sex. Dr. Lavell has been chosen as Dean of the former, and Dr. M. Barrett of the latter. It is expected that both schools will be opened for lectures this coming winter. There has been a good deal of talk about the usefulness of having women educated in medicine for the purpose of sending them out as missionaries to foreign lands. This may seem very fine, but after all it is the question of dollars and cents that is at the bottom of the whole move, both on the part of the medical men agitating the schools and the ladies who wish to secure medical qualifications. There cannot be any doubt in the minds of all who think calmly on the matter, but that these young female doctors will locate on our streets and in our villages and towns, whereas those who go abroad, as medical missionaries, will be about as numerous as the Howards and Peabodys. The move is certainly very unpopular with the medical profession at large in this country.

The Provincial Board of Health for Ontario was established a little more than a year ago by an Act of the local Legislature. In the short time that it has been in existence it has done much good work. One of the leading objects it has had in view is the establishing of local boards to take charge of matters of public health over small areas. One point, however, must be regretted, that the salaries of the gentlemen on the board are not sufficiently large to enable them to give their whole time to sanitary matters, instead of dividing it between the duties of public office and private practice. The smallness of the salaries at present granted should be protested against.

Several of the Canadian medical schools have organized a summer session. So far these have been very successful, and in future they will form a prominent part of the education of medical students. The class of lectures given are distinctly practical, and on parts of the work that could not receive sufficiently full attention during the winter months. This form of summer work will have a great influence in raising the standard of medical education.

At the recent meeting of the College of Physicians and Surgeons, a good deal of discussion took place on the question of quackery. Various remedies were suggested, among which might be mentioned the plans of asking Government to grant no patents for proprietary remedies, or imposing a heavy tax upon such preparations; or, again, of having an inspector appointed, who would condemn all worthless compounds. Perhaps the best plan was that of compelling the manufacturer, under heavy fine, to print distinctly on the wrappers the exact composition of the mixture. This would certainly kill most of the nostrums for sale in this country. Another burning question was, what to do with a nondescript and apostate class of practitioners, who advertise special cures, and fill the columns of our dailies with cases successfully treated. No doubt some action similar to that taken in Britain, would prove wholesome—of removing the name from the register of any person who advertises a remedy of special virtues, the secret of which he keeps to himself. It is to be hoped that fearless action will be taken soon with this class.

"COPPER AND CHOLERA."

To the Editor of The Medical Record.

Sir: There appears to me another explanation of the immunity enjoyed by workers in copper and brass than that suggested by Dr. Peckham in your issue of August 18th, namely, the fact that in most cases mineral acids especially *sulphuric acid* is more or less used by them, and that they come into contact with acid salts in much of their work. Anyone who has had occasion to visit a brass foundry has seen the pickling-vats in which, with the aid of this acid, castings are deprived of the "skin" of oxidized metal and fused sand, after coming from the moulds. He may also have noticed that in many of the processes of brazing or soldering joints, mineral acids are used to give a bright and clean surface. This is especially the case when electro-plating or hand-plating is carried on.

It is not difficult to understand that in one way or another these acid substances gain an entrance to the alimentary canal, and that they there prevent the development or destroy the vitality of cholera-germs.

As an opinion of the power of mineral acids to prevent the development of cholera, allow me to quote

Surgeon Eli McClellan, of the U. S. Army, one of the authors of the Government Report on "The Cholera Epidemic of 1873 in the United States," p. 32: "The experience of the writer is strongly corroborative of the beneficial results which may be obtained from the use of sulphate of iron and dilute sulphuric acid as prophylactics during an epidemic of cholera." In another work, intended for popular use[1] Dr. McClellan writes as follows: "When the specific poison of cholera has been swallowed and comes in contact with healthy gastric juice, the latter, by virtue of its acidity, utterly destroys the poison. If, however, the gastric juice has not its normal acid reaction, then the specific poison, meeting only alkaline fluids, is able to reproduce itself," etc. He subsequently[2] advises the use of a mixture of one ounce of sulphuric acid to a gallon of water as a disinfecting solution for "cholera stuff" and soiled clothing; and also says (p. 94), "A mixture of aromatic sulphuric acid and laudanum is about the most efficacious [prophylactic] which can be employed."

If we accept the opinion of so able an authority respecting the value of sulphuric acid as a preventive of this disease, is it not easier to account for the immunity of copper-workers, who use it almost constantly in their art, than to presume that the metal itself affords the protection.

F. A. CASTLE, M.D.
102 EAST FIFTY-SEVENTH STREET, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 11, 1883, to August 18, 1883.

BAXTER, JEDEDIAH H., Chief Medical Purveyor, United States Army. To proceed to San Francisco, Cal., *via* St. Louis, Mo., on public business connected with the Medical Department, and on completion thereof will return to his station. S. O. 185, par. 1, A. G. O., August 11, 1883.

BARNETT, RICHARDS, Captain and Assistant Surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 149, par. 2, Department of the East, August 10, 1883.

BURTON, HENRY G., Captain and Assistant Surgeon. Relieved from duty at Fort A. Lincoln, D. T., and assigned to duty at Fort Assinniboine, M.T. S. O. 141, par. 1, Department of Dakota, August 11, 1883.

BENHAM, R. B., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Assinniboine, M. T., and assigned to duty at Fort A. Lincoln, D. T. S. O. 141, par. 2, Department of Dakota, August 11, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 18, 1883.

BRIGHT, GEORGE A., Surgeon. Temporary duty at Naval Rendezvous, Philadelphia, Penn.

NEILSON, JOHN L., Surgeon. Temporary duty on Receiving-Ship Franklin, Norfolk, Va.

MARTIN, WILLIAM, Assistant Surgeon. Navy Yard, Pensacola, Fla.

DIARRHŒA IN INFANTS.—Dr. Lewin has found great success in the treatment of diarrhœa in young infants by giving them soluble albuminate of tannin, made by adding white of egg to a solution of tannin; the white of egg must be previously beaten up with some water.—*Ther. Gazette.*

[1] Wood's Household Practice of Medicine, vol. ii., p. 81. New York: W. Wood & Co. 1880.
[2] Loc. cit., p. 90.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending August 21, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 14, 1883.....	0	53	28	2	36	25	0	0
August 21, 1883.....	0	45	32	3	20	24	0	0
Deaths.								
August 14, 1883.....	0	10	4	2	16	15	0	0
August 21, 1883.....	0	11	14	3	10	15	0	0

PASTEUR'S PENSION.—On the 12th inst. the bill increasing M. Pasteur's pension from 12,000 to 25,000 francs, with reversion to his wife and children, passed the French Chamber without a division. In reply to certain dissentients, M. Paul Bert cited the English grant to Jenner, and scouted with warmth the charge of sordid motives brought against Pasteur.

THE TREATMENT OF TREMOR.—According to M. Feris, of Brest, veratria has the property of causing various kinds of tremor to disappear, and that in the space of ten days or a fortnight. It has been employed in disseminated sclerosis, alcoholism, and adynamic states. The dose is four pills per diem, each containing half a milligramme of the alkaloid.

FRENCH TREATMENT OF CROUP.—Dr. Jules Simon treats croup as follows: As soon as the malady is diagnosed he touches the throat with lemon-juice, or a solution of muriate of iron every two hours. Every three hours he washes the part affected with a solution of borax (two drachms to the ten ounces). At the same time the atmosphere of the room is charged with atomized phenic solution, a stimulant nourishment is given, and three to five drops of tincture of iron administered every three hours. When dyspnœa becomes apparent an emetic is to be given, but if the symptoms are not relieved tracheotomy must be performed without delay. The results of the operation are not, however, very satisfactory, as when the child is under two years a fatal termination is the rule, whereas above that age one out of five recovers. The after-treatment consists in placing a piece of tarlatan over the canula, warming the room, and administering beef-tea and tincture of iron. The removing and cleaning of the canula should be done by an experienced person, it might be definitely removed after the eighth or tenth day. M. Simon considers that chlorate of potash is of little use in croup.

THE EXTENT OF CROSS-EXAMINATION OF MEDICAL WITNESSES.—The courts of Pennsylvania are more strict in regard to the proper extent of cross-examination of witnesses than those of this State. It was held not long since in a Pennsylvania suit that a physician called as an ordinary witness in a case involving the question of professional negligence, could not be cross-examined as to his knowledge as an expert. In this State considerable freedom of cross-examination is allowed, and questions of this character would, no doubt, be admissible.

THE RIGHT OF PREVENTING PERSONS FROM ATTENDING FUNERALS.—A curious case involving the right to prevent persons from attending a funeral was recently decided in Rhode Island. The facts were that the plaintiff's wife had been enticed away from him by the defendants, and while absent from him she had died; the

defendants conducted the funeral services, and refused to allow the plaintiff to see her body or attend the funeral. Suit was then brought for damages against the defendants. The Court refused to sustain the action in the following opinion: "We find no ground, either in reason or authority, for holding that any person has a right to enter the possessions of another without his consent for attending a funeral. It is suggested that the public nature of funeral ceremonies implies a license; but such license, if one arose in this case, was revocable, and was clearly revoked by the subsequent conduct of the defendant as set out in the court. It is also suggested that the wrongdoing of the defendants in enticing away the wife raises a license of which the plaintiff may avail himself under this court; but we think that the right of the husband in this regard was at most a right to have the custody of the body of his wife, and to order the funeral ceremonies himself in his own possessions, and that the license, if any was implied, was to enter the premises of the defendants for the purpose of assuming such custody and removing the body for that purpose. But in this case there is no allegation of demand for the body or refusal to deliver the same; the only allegation being that the plaintiff was prevented from attending the ceremonies which were proceeding under the charge of the defendants."

Iodoform in the Treatment of Leucorrhœa in Children.—Dr. Weissenberg claims excellent results in the treatment of vulvo-vaginitis in girls by iodoform (*Memorabilien*, June 9, 1883). His method is the following: The child is bathed for the first few days in lukewarm water, and the vagina is syringed out two or three times a day with lukewarm infusion of chamomile. When the inflammation is somewhat reduced by this treatment, usually after three days, the vagina is dried with salicylated cotton on a uterine sound, and then an iodoform pencil is passed up above the hymen. In two days, after a bath, this procedure is repeated, after which the cure is in most cases complete. Instead of the pencil, iodoform in powder may be strewn in the vagina, with sometimes better results.

Infanticide and Abortion in the Hawaiian Islands.—When the Boston missionaries first settled among the natives they found infanticide practised to an alarming extent, mothers deliberately smothering, strangling, or burying alive their newly born. Mrs. Judd, the wife of that Dr. Judd to whom the Hawaiians owe their present form of government, mentions the frightful extent to which infanticide was carried in 1828, and records a case under her own observation, where a mother was known to have buried alive eight out of ten children born to her. Civilization, however, has somewhat refined the native taste, so that abortion has superseded the more barbarous method, and the manner in which they induce it is well worth relating. The unfortunate woman is placed upon her back on the floor, and the officiating *Kahuna*, or medicine woman, taking a stone in either hand, proceeds to knead and squeeze the abdomen, endeavoring to get the uterus between the stones. Next she gets upon her victim's abdomen with her knees, and walks all over it, so to speak. This violence generally brings on flooding, and in a short time abortion, but alas! frequently at the expense of the patient's life, though in one case which was cited to me dumb-bells replaced the stones in the operation, great violence being done, and yet the woman went on to term and gave birth to a healthy child.—Dr. Heffinger *in Boston Medical and Surgical Journal.*

The London "Times" on the Modern Medical Student.—Commenting on the fact that one of the members of the Royal Family presided at the graduating exercises of St. Thomas' Hospital, the *Times* says: "The medical students of to-day will be the practitioners of a few years hence; the men on whose care and skill the preservation of precious lives must frequently depend, and who will become, in an infinite number of matters, the most confidential and most trusted advisers of all classes of the community. Everything which elevates them in their own eyes, which renders them more conscious of the importance of the duties they will be called upon to discharge, and more zealous in preparing to discharge their duties thoroughly, is so much direct gain to the community. And it may be that such consequences will in some degree flow from the countenance and the favor of Royalty. Thirty years ago the medical student was a familiar character in fiction, and both Charles Dickens and Albert Smith, according to their several lights, described the aspects under which they were accustomed to regard him. Bob Sawyer will remain as a type of a class as long as English literature endures; but he is a type of a class which has long ceased to exist. The medical students of to-day can hardly be said to present any salient characteristics, or to differ in any appreciable degree from the student of any other profession, unless it be that there are few others in which the examinations are of equal severity or of equal range, or in which such laborious preparation is necessary for the attainment of success. The mere riotousness of youth, the natural exuberance of the years from seventeen to twenty-one, has found outlets of which Bob Sawyer had no knowledge; and athleticism, volunteering, and bicycles have superseded tavern orgies and nocturnal mischief."

An Active Principle of Ergot has been obtained by Gehe & Co., Paris. It is called ergotinin, and it is said to have very powerful hæmostatic properties. It is very expensive, however, one gramme costing about forty dollars.

A Bon-Mot of Ludwig.—Professor Ludwig, the well-known physiologist, of Leipzig, is one of the few German professors who can say a bright thing occasionally. Some time ago, Professor Marey, of the College of France, was paying a visit to the German universities, and called upon Ludwig, who paid him the honors of the institution. Marey showed himself particularly surprised at the great size of the frogs which were submitted to experiment. "That ought not to surprise you," said Ludwig. "In France you have the big Marey (swamp), but the little frogs; we have the little marais, but the big frogs."

A Novel Laryngoscope.—Dr. Thomas Dimock writes as follows to the *Therapeutic Gazette:* "One of the best methods for examining the throat without the aid of the ordinary laryngoscope is the following: Bring the patient near a good light of any kind, and after the mouth has been opened place on the tongue a depressor, then request the patient to yawn. The larynx will immediately rise up and every part necessary to be seen will be brought fully into view. The nose should be held, as this compels breathing through the mouth. Thus the velum pendulum palati is raised, the anterior and posterior pillars become widened, exposing the back of the tonsils and pharynx. The tongue must be pressed downward very gently, as it always resists harsh treatment." The question naturally occurs, Suppose the patient will not yawn?

Small-Pox, Petroleum as an Ectrotic.—Dr. Kanenski states that he has obtained excellent results, even in the confluent form of small-pox, by painting the skin with a solution of petroleum in olive oil, one to three or four.—*Przeglad Lekarski. Ther. Gazette.*

A New Use for Chloral Hydrate.—B. Bonatti recommends chloral hydrate in combination with senna as a rapid and safe drastic cathartic. He prescribes:

℞. Infus. sennæ	fl ℥ x.
Chloralis hydratis.....	gr. xxiv.–l.
Syrupi	fl ℥ j.

With this he obtained an action where cotoin and jalap had failed.—*D. Med. Zeitung. Pharmaceutische Centralhalle. Ther. Gazette.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 9 NEW YORK, SEPTEMBER 1, 1883 Whole No. 669

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Original Articles.

ATONIC DYSPEPSIA.

BY J. MILNER FOTHERGILL, M.D.,

EDINBURGH, SCOTLAND.

HONORARY M.D. RUSH MEDICAL COLLEGE, ILLINOIS, ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

DYSPEPSIA is a malady which presents itself under various aspects. In one case there is great irritability of the digestive organs, they are easily upset by any unsuitable food, by exposure to cold, or by any great emotion; in another the digestive organs are enfeebled by venous engorgement, as in the gastric catarrh of valvular disease, or a failing heart; in another case there is simply want of tone in the digestive organs with a defective or capricious appetite. These are three well-marked varieties; there are others equally marked which need not be alluded to at present.

When the dyspeptic patient presents himself or herself before the physician, the first thing to be done is to know something about the family history, the history of the individual, the occupation, the opportunities for taking food, the condition of the teeth, and the state of the bowels. One is just as important as another. An elaborate plan of treatment may be rendered entirely futile by omitting to ascertain the condition of the teeth, which, perhaps, is such that efficient mastication is simply a physical impossibility. Without some rectification of this defect all the rest is useless, no matter how elaborate. On the other hand, it is well to investigate the family history, and learn how far the family is one in which diseases are developed which are linked with failure of the nutrition. If such family maladies exist, then the case will probably be comparatively intractable, as contrasted with a case where the family history has other associations. Then the history of the individual is important. If he be one who has lived long, where inappropriate food has been taken for a lengthened period, such as a stock-rider in Australia, or out West, who lives on damper with salt pork, relieved by tinned provisions, until the digestive organs have been thoroughly upset; then the case will require time for the organs to recover themselves. In another case the individual will have endured great mental tension for a considerable time without any failure of the nervous system; but the digestive organs have given in. Thus in one case, well known to me, the patient underwent two years of the most intense strain in Wall Street, his nervous system did not suffer in the slightest, but his liver had almost lost its power of dealing with albuminoids. Another for seven years worked hard building up a business in Russia, with the result that he is a confirmed dyspeptic, with a colon very readily offended. A third carried all before him as a civil servant in India, but has now for some years been laid upon the shelf an incurable dyspeptic—or, at least, no one has been able to endow him with the capacity to digest enough to enable him once more to work. It is eminently desirable, then, in all cases, to ascertain distinctly what kind of a case you have to deal with. The occupation is scarcely less important, for if a city man, the ranges of food, through the middle of the day at least, is restricted to the viands of restaurants, most of which are unsuitable to a dyspeptic. Or the patient is connected with a large house of business and must take "what is going," that is, what is provided for the inmates generally. In these last two cases the dietary becomes the difficulty.

Having cleared the case of all such elements, and formed a fair conception of what its surroundings are, the indigestion may be approached directly. The first matter is to ascertain what amount of pain is produced by the digestive act, its time in the digestive process, and whether or not much flatulence is coexistent. When an ulcer is present the pain is set up almost synchronously with the introduction of food into the stomach, as soon as the contents become acid from the flow of the acid gastric juice. Here the line to be taken is clearly that of trying to put gastric action in abeyance and trust to the pancreas. Milk sheathed with an alkali, with or without some biscuit powder, will probably pass readily through the stomach without producing much suffering, and be digested successfully in the intestine, and in order to save the stomach the patient may be fed per rectum to a considerable extent for a time. Physiological rest so being afforded to the stomach the healing of the ulcer is favored and, in many cases, is readily accomplished.

In other cases the pain is not experienced until we believe the food is passing through the pyloric ring, and intestinal digestion is being inaugurated. What do we do in such a case? There are two lines open to us which may be combined in practice: (1) we may try what can be done by suitable food and some pepsin, to secure complete disintegration of the contents of the stomach so that they shall not irritate the duodenum; (2) we may stimulate the action of the liver and give liquor pancreaticus. And by such measures we can probably do the patient a great deal of good. At the same time, a sufficient time must be given to the taking of food; while the patient should be relieved from worry, as by leaving his or her business or occupation for a time, thus giving the medicinal treatment a fair chance.

And now a few words may be said about the resort to artificial digestive agents. Of the extreme value of these agents in strengthening our hands when dealing with indigestion there can be no two opinions, and Dr. William Roberts, F.R.S., ought to be held in affectionate remembrance by every dyspeptic, both those who require these agents actually and those who might come to require them.

But it seems to me, from a recent experience, the tendency is to resort to these agents at once, instead of encouraging the natural efforts and holding the artificial agents in reserve. For instance, a few days ago a youth came up from the midlands, who had been put upon artificially digested milk and milk porridge, but with whom no attempt had been made to foster the digestive act. To such artificially digested food had been added phosphorus and strychnine, while nothing had been done to secure proper action of the bowels. On explaining that the line which suggested itself to me was that of encouraging the natural processes, instead of doing the work for them, the father of the patient, a farmer familiar with the varied outcomes of pauperism, showed his comprehension of what I was driving at by remarking, "Not to make a pauper of his stomach, Doctor, eh?" which meant that the stomach was weakened by having its work done for it. Now this was precisely my own view in familiar phrase. In such cases, the proper practice, in my opinion, is to encourage the natural powers, giving such food as shall least tax them. This is a good line to take; and

then if the case does not move forward, to give some artificially digested food, once, or perhaps twice a day (in order to nourish the body); pursuing the old line at the same time. But if this resort to artificially digested food were forced upon me, I should regard it as indicating a reduction of the body expenditure to the minimum. The patient ought to be sent to bed. Warm in bed, the need for hydrocarbons is small; at rest the tissues require little repair. In bed the amount of food required for the body needs is much less than when up and about. A patient remarked to me some time ago, "I can't eat enough to feed me properly, and if I did I could not digest it!" What was to be done? He was sent to bed, and then "the body expenditure" fell below "the body income" and the surplus went to add to the body weight.

What are our means of encouraging the natural powers? First the digestive act in the gastro-intestinal canal, and secondly in the liver. And this involves the question, What is it which needs improving, the assimilation of hydro-carbons or the assimilation of albuminoids, or both? This is a matter too little insisted upon. Too commonly, action is taken rather blindly, and malt-extract (diastase), or pepsin, or pancreatic preparations prescribed without that discrimination which is so desirable. My own rule, so far as it is formulated, and it needs some corroboration (possibly some correction), is taking the following direction: When the patient is spare and too thin, then starch and sugar are indicated; and diastase should be added to farinaceous matters. Surplus sugar is laid down in the body as fat—*i.e.*, within the storing capacity of the organism. Then when there is any tendency to glandular degeneration, and that growth of lowly connective tissue spoken of commonly as tubercle, the indication is some fat which can be assimilated, of which cream, butter, and cod-liver oil are the most digestible forms. When it is desirable to increase the power of assimilating fat, there are several measures which may be adopted, singly or together. There are agents which stimulate the flow of bile, which emulsionizes fat so that the pancreatic secretion may further act upon it, and the most useful of these is ipecacuanha. Ether has been found to stimulate the flow from the pancreas and so aid materially in the assimilation of fat. It might be given with liquor pancreaticus and cod-liver oil. Sometimes when cod-liver oil is not assimilated, it is well to resort to the following plan. The oil is observed unchanged in the stools, *en masse*, never having been divided into an emulsion. Here it is well to remember that a fatty acid helps in the emulsionizing of fat. So give some castile soap, say two grains, with two grains of dried ox-gall, in a pill, about two hours after a meal, when the contents of the stomach are passing into the duodenum. The fatty acid and the bile assist the natural efforts, and then the assimilation of fat is often materially aided.

At other times the liquor pancreaticus, guarded with an alkali (which may be potash or magnesia, and not necessarily the nauseous bicarbonates of soda), given as Dr. Roberts directs, is of great service. Probably all the constituents of our food—starch, albuminoids, and fats—are digested by this agent. Or some of the compounds containing several, or, indeed, all of the digestive agents may be used with success. If the medium is acid then pepsin is efficient; if the medium is alkaline, then the diastase and the pancreatic ferments are effective.

In very acute conditions it may become necessary to give milk and milk-gruel, already largely digested by the addition of liquor-pancreaticus; or these may be given at times, with ordinary milk and seltzer-water, or lime-water at other times in the day. Such are conditions where there is much gastric irritability with vomiting, and a tongue denuded of epithelium, or seen to be covered by a growth of young epithelium. This condition is not uncommon in the course of phthisis, and when it shows itself it requires its own peculiar treatment, all others being abandoned, for the time at least. Here the line to be taken is that of alkalies and bismuth, with or without some hydrocyanic acid. Whenever the tongue is raw or bare, then alkalies are to be given, and acids carefully eschewed. If the reader has doubts about the last, let him just try the experiment with his eyes open, and watch it. It will not be long before the results will be apparent to him. Bismuth with soda in calumba is the old and well-known combination for such state; and with it the milk dietary just described may be combined. More commonly, however, a less grave and acute condition is found, where the state of the tongue is just the opposite, viz., covered with a layer of dead epithelium. Here acids are not only unobjectionable but are very useful. Indeed, soda sulphate with some acid is the combination which gives the most satisfactory results. Under this the tongue soon cleans, the appetite returns, and the stools are of a normal color. When the primæ viæ are once more acting normally and in a healthy state, then, and not till then, may some chalybeate be given. But as long as the liver is in any way disturbed, chalybeates are useless, and usually disagree. When the appropriate time comes, then iron is useful; but however impatiently the time is awaited, it is well to be patient. To resort to iron prematurely is a very common mistake. Sometimes when the tongue is placed in a side light, a yellow shade can be detected, and so long as that remains so long must chalybeates be withheld.

It is necessary in all cases to keep the bowels open. There is no treating indigestion satisfactorily so long as the bowels are loaded with fæces. The bowels must be swept out freely, and then kept open; and, if necessary, a sharp purgative must be given from time to time. Especially is this necessary with female patients, who dislike being purged (as it pulls them down), and who are very liable to allow themselves to become constipated. The reader, perhaps, thinks it quite unnecessary for me to insist on the bowels being kept properly open. But it so happens that to find patients, who have been under very judicious treatment in every other respect, but whose bowels have not been attended to, is far from an infrequent occurrence. Either the medical man has paid too slight attention to the matter, or the patient has failed to carry out the orders, or, may be, both. Anyhow, the fact remains, and so does the indigestion for that matter, and the case is truly incurable until this is rectified. It is easily done, as a rule, by adding the requisite dose of laxative to the pill I am about to describe. It is well, however, to keep short of purgation, else the pill is abandoned, and its other effects lost. So keep on the short side a little, and let the patient take some laxative water the first thing in the morning, if indicated. But a good many patients dislike this water in the morning, and then it is well to prescribe two pill forms, one more sharply laxative than the other, and let the patients take one of each daily, or otherwise vary them according to their requirements. This does not give much trouble, and that is a matter agreeable and acceptable to the patient. Pills can be kept out of sight, and people, as a rule, object to be regarded as invalids. Besides, no little matter, pills are tasteless, and when the medicine has to be continued for weeks or months, if that medicine be nauseous the patient conceives a mortal repugnance to it.

When the symptoms of acute discomfort show themselves during and after a meal, then a dose of pepsin often makes matters comfortable (McKesson & Robbins' pepsin pill is most convenient), or a second may be indicated if the meal contain much meat. Such immediate measure is excellent, while the following pill is taken before meals, steadily and continuously. There are many hepatic stimulants, as mercury, arsenic, euonymin, baptisin, iridin, leptandrin, etc. But it may be questioned if any of them is so efficacious as ipecacuanha. A century of experience tells of the utility of ipecacuan in indigestion. It was a constituent of the dinner-pill of the last century. Not only does it stimulate the liver, and so be useful in cases of indigestion

where there is either bile acids formed in excess or lithates present (that is, the peptones which find their way into the portal vein from the intestinal canal and which, converted into proteids, are elaborated into the albumen of the liquor sanguinis by the liver normally, are transformed instead into bile acids or urates; the patient loses flesh, and on a flesh dietary only makes more bile or more lithates, without gaining weight), but ipecacuan is a "pepsin-persuader" from its action on the gastric lining membrane with its multitudinous glands and follicles. Ipecacuan combines properties, indeed, as does no other agent, in my opinion. Then there is often atony, either general or in the bowel, and for this strychnia is an admirable remedy. Perhaps, too, flatulence, for which a carminative is indicated. Then there is the vehicle, which may or may not be a laxative, according to the case. The pill would stand then somewhat as follows:

℞. Strychniæ..... gr. $\frac{1}{30}$
Pulv. ipecacuan..... gr. $\frac{1}{8}$
Pulv. piper. nig..... gr. jss.
Ext. gentian..... gr. j.

Yes, there it is! How familiar it does look; and what a lot of my patients are taking that pill with Pil. al. et myrrh., or Pil. coloc. co., according to their necessities! Once or twice a day before meals steadily followed out for weeks, with a pepsin pill, or maybe two, at dinner or other substantial meal, and a regulated dietary of farinaceous matter with milk. Steam-cooked cereals with milk, and a little fish or fat bacon to follow for breakfast. Lunch, a biscuit and milk, or a milk-pudding (made *without* an egg), with some stewed fruit, with a glass of wine. Then a walk before lunch and a rest on the sofa after. For dinner, some white meat with the milk-pudding and a glass of wine, with pleasant cheerful society. Perhaps, if the patient be hungry in the night, some milk and malt extract, gently warmed and kept under a cosy (which both keeps it warm and untainted by the air of the bedroom), to be taken in the small hours of the morning. A bracing locality and freedom from toil and worry.

This is about what I generally advise, and it seems to suit the patients, or else they tell me falsehoods and pay their fees in vain. Such, indeed, is the broad plan with dyspeptics suffering from inability to digest their food. Only the measures are to be fitted together in each case, as Opie mixed his colors—with brains!

A SERIES OF TWELVE OVARIOTOMIES.

By MATTHEW D. MANN, A.M., M.D.,
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OVARIOTOMY has become so common that one is almost forced to make excuses for publishing a case or even a series of cases unless they mount up into the hundreds. Although the various steps of this operation are now nearly settled, there are some points still in dispute. These can only be decided by experience, not only of each operator for himself, but by the careful study of the results obtained by others, and it is to this end that I make this report.

The twelve cases were, with the exception of the first, operated upon within the space of fifteen months. Of these nine recovered and three died; of those which died, the first (No. 5) was almost moribund when the operation was begun. Her pulse was 140 and temperature 103°. She had had suppuration of the cyst for a number of months and the cyst contents were very fetid and contained gas. She had been tapped three times, the pus, however, antedating the first tapping, and there was a small fistula opening into the abdominal cavity which emitted a clear fluid and at times gas and pus. The sac was attached over nearly the whole abdominal parietes and was so decomposed that in separating the adhesions it tore and let some of the contents into the abdominal cavity. This was carefully washed and sponged out and a glass drainage-tube introduced. She rallied for the first twenty-four hours, but soon the temperature rose and she passed into a condition of violent mania and died forty-eight hours after the operation. She was operated upon at her home in the country and I saw her but once afterward.

The second fatal case (No. 6) was a cyst of the broad ligament, I diagnosed the probable nature of the tumor by tapping before operating, but decided to operate as the cyst seemed thick and very tense, and the patient was eager for relief and the diagnosis at best uncertain. The contents were like spring water and contained only a slight trace of albumen. The operation was very simple, there were no adhesions and no blood lost. The incision was very short and the pedicle long and the tumor was removed without disturbing either ovary. Everything was so favorable that there seemed to be no possible way in which a bad result could occur. She did splendidly for the first week and then developed symptoms of septic peritonitis and died on the twelfth day.

The cause of death in this case I cannot but attribute to hospitalism. She was operated on in the Buffalo General Hospital; she had a private room and nurse, but in the same building, about the same time, there had been several cases of septic disease (puerperal fever, etc.). I can see no other reasonable explanation of the cause of death. No blame can be attached to the hospital or its management, for no general hospital is, or ever can be, a proper place for abdominal surgery. I find it recorded that out of one hundred and forty-two cases operated on in four of the leading London hospitals, there was an average mortality of sixty per cent., while in two hundred and ninety-six cases the same year at the Samaritan Hospital, a small special hospital, under Mr. Spencer Wells, the mortality was only twenty-two per cent. A certain allowance must be made for the special skill of the one operator, but this alone could hardly account for the great disparity in results.

In justification of this operation as against tapping, I will say that the cyst when emptied weighed over three pounds and would undoubtedly have refilled; moreover, the diagnosis of cysts of the ligament by the peculiar character of the fluid has been shown to be unreliable.

The lesson taught by this case was still further enforced by the next (No. 7). This was in every way promising, no adhesions of any moment and the patient's general condition was good. The earlier period of convalescence was very favorable; the temperature remained nearly normal and the pulse generally below ninety, until the eighth day; she then had a slight chill; vomited several times, and felt very weak and uncomfortable, the temperature fell to 97 and the pulse went to 118; from this time on she steadily failed. The temperature kept near the normal line, sometimes below, but the pulse went to 110–120 and diarrhœa set in. Transfusion was tried, Dr. Long of this city generously furnishing the blood, and Dr. Charles Cary, who has had considerable experience in this procedure, kindly lent me his aid and superintended the operation. The operation was by the mediate method. The blood was withdrawn from the arm of the donor by an aspirator and forced into the arm of the patient without allowing it to come in contact with the air. In this way it was only a few seconds out of the veins. The canulæ of an Aveling's apparatus were introduced into the veins of both parties before the aspirator was attached. The effect of the transfusion was but transitory and she died exhausted on the fourteenth day after the ovariotomy. There was no pain but the vomiting kept up and the large dejections were persistent. The mental faculties were unaffected.

The autopsy did not throw much light on the cause or nature of the disease. There were a few ounces of blood, serum in the abdominal cavity, and several feet of the small intestine were as black as ink. There were also spots of discoloration on the stomach and large intestine. Nothing else wrong. Union of the wound complete; no

clots and no evidence of peritonitis. I cannot but think that the trouble was septic in its origin, and attribute it to the same cause as the other, but the symptoms were not those we generally associate with septicæmia. However this may be, it served to impress most forcibly on my mind the fact that a general hospital, no matter how well cared for, is no place for ovariotomy.

The point has been made that double ovariotomy is more dangerous than where only one ovary is removed. In three of these cases (Nos. 2, 3, and 8) I removed both ovaries and all recovered. In No. 8 the supravaginal portion of the uterus was also removed. An interesting point in this latter case is that this patient, although she survived the removal first of a fibrous polypus from the cervix and then of double ovarian tumors with the uterus, is now about to succumb to cancer in the vagina.

No.	Date of operation.	Age.	Condition.	No. of Children.	No. of Pregnancies.	Time since first noticed.	Adhesions.	Size and nature of tumor.	Drainage.	Place of operation.	Treatment of pedicle.	Result.	Previous attendant.	Remarks.
1	Nov., '79.	30	M.	0	1	1 year.	Pelvic and uterine; extensive.	Dermoid, 15 lbs.	2 tubes.	Home.	No pedicle; portion left in.	Recovery.	Dr. Booth.	See Am. Jl. Obstet., 1880.
2	Jan. 4, '82.	27	S.	0	..	1½ year.	Intestinal and pelvic; extensive.	30 lbs.	1 tube.	Buff. Gen. Hosp.	Enucleation.	Recovery.	Dr. Rochester.	See Buffalo Med. Jl.
3	Feb. 1, '82.	35	M.	1	..	1 year.	Slight.	35 lbs.	None.	Buff. Gen. Hosp.	Tied and cut.	Recovery.	Dr. Freeman.	See Buffalo Med. Jl. Great deal of ascites; abscess formed in pelvis below tube.
4	May 7, '82.	28	M.	3	..	2½ years.	Omental; slight.	40 lbs.	1 tube.	Buff. Gen. Hosp.	Tied and burnt.	Recovery.	.....	
5	May 8, '82.	39	S.	0	..	1½ year.	Abdominal; extensive.	30 lbs.	1 tube.	Home.	Tied and cut.	Death.	Dr. Kittinger.	Pt. almost moribund; suppuration of sac.
6	June 13, '82.	28	M.	0	..	2 years.	None.	28 lbs.	None.	Buff. Gen. Hosp.	Tied and burnt.	Death.	.....	Died of septic peritonitis on 12th day.
7	Sept. 4, '82.	49	M.	5	..	½ year.	None.	25 lbs.	None.	Buff. Gen. Hosp.	Tied and burnt.	Death.	Dr. Tapp.	Died on 14th day.
8	Nov. 7, '82.	50	M.	2	..		Very extensive and firm; pelvic.	Nearly solid, 15 lbs.	None.	Home.	Tied and burnt.	Recovery.	Dr. Crawford.	Uterus was removed with tumors. See N. Y. Med. Jl., July 7, 1883.
9	Nov. 8, '82.	77	M.	2	3	1½ year.	Abdominal; moderate.	60 lbs.	None.	Home.	Tied and burnt.	Recovery.	Dr. Burwell.	Rapid convalescence.
10	Mar. 6, '83.	39	M.	2	..	8 years.	Slight.	40 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	Dr. Feely.	Rapid convalescence.
11	Mar. 10, '83.	44	M.	4	..	2½ years.	Few; very long.	Half solid, 20 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	.....	Rapid convalescence.
12	April 4, '83.	60	M.	4	2	1 year.	Slight.	25 lbs.	None.	Boarding House.	Tied and burnt.	Recovery.	.....	Rapid convalescence.

It will be noticed that Case 9 had reached the great age of seventy-seven years. It is generally thought that such an age is a contra-indication to an operation, but statistics do not support this idea. In the last edition of his work on ovarian tumors (1882), Sir Spencer Wells, in speaking of the results in this operation as modified by the age of the patient, says: "The small mortality shown in patients below the age of twenty-five and above the age of sixty, and the comparatively high mortality between those ages, except from forty to forty-five, are remarkable." The number of cases on which he bases his percentage of mortality between sixty and seventy years of age is forty-five, with thirty-seven recoveries (eighty-two per cent.), while above seventy he has had but two cases, one of which recovered at seventy-seven. In 1853 Atlee reported a case aged seventy-eight, in which the operation was successful. Thus we have four cases with three recoveries. My patient seemed to be in perfect health, aside from the tumor, and was very anxious for relief. The tumor had been growing only eighteen months and had reached a great size. I could see no good reason for not operating and the result justified this view. Although the operation was rather severe and long (an hour and a half), owing to the difficulty of securing all bleeding points, she stood it well and made a rapid recovery.

In the earlier cases I used the drainage-tube for a slight indication, but I found so much annoyance from its use and so much difficulty in closing the sinus left by it, that I discarded it after the fifth case. Still I can readily imagine a case where its use might be unavoidable. In Case 4 there was considerable ascitic fluid outside the tumor, and I should be inclined to consider this a good reason for the employment of a tube. A large oozing surface after an enucleation, as in Case 2, would also be an indication, and its use in this case, I have no doubt, had a large influence in promoting the recovery. I have used the simple glass-tube, slightly curved, and carried to the bottom of the cul-de-sac.

The method of treating the pedicle is now so nearly settled that but little need be said about it. I have always tied and then severed the tissues, either with scissors or latterly with the thermo-cautery. For ligatures I have used the raw silk well carbolized. That the silk is absorbed I do not believe, as I have once or twice seen silk which had remained in the abdomen for a long time unaltered. For adhesions, I either divide with the cautery alone or tie first; if the tissues are very vascular, with catgut, or if they are very large, with silk.

The length of the incision I have never considered as having much influence on the result. Operations in which the incisions are long will always make a worse showing than those with short incisions, but the reason is not in the length of the incision but in the conditions which make the long incision necessary. My rule has been to begin with a short incision and to enlarge it as much as necessary as I proceed.

An article of this kind at this time would not be complete without some words about antiseptics. I began with antiseptics, spray and all, and my first case was done under the carbolic spray. But soon after this I lost a case of oöphorectomy (*American Journal of Obstetrics*, October, 1880) from what I believe to have been carbolic poisoning. This made me afraid of carbolic acid, and I dropped the spray for a time. After I had lost three cases in succession, I began to inquire very carefully for the cause, and thinking that perhaps the use of the spray would better my results I began it again, using, however, boroglyceride (1–20) rather than carbolic acid. The last five cases were done under this spray, and as all recovered I am inclined to attribute something of the result to its use. There is one symptom which sometimes follows it and which I have seen noted elsewhere, which is very alarming unless its cause is understood. In Case 11 the pulse and temperature remained normal, but there was a very unaccountable and marked dryness of the tongue and mouth. This continued, not-

withstanding brandy, potas. chlorat., etc., and ceased suddenly on the third day. That it was due to the boroglyceride I am sure, as others have noticed the same thing after its use. For hands, instruments, ligatures, and sponges, I have used carbolic acid, and as a dressing boroglyceride cotton held in place by a flannel bandage, rather than adhesive straps.

The preparatory treatment has been the simplest possible, a thorough cleansing of the bowels and a bath, nothing more. To dose a patient with quinine and opium, and thus upset the stomach and disturb the nervous system just when a great call is about to be made on them, always seemed to me to be unphysiological and irrational. The after-treatment has likewise been simple, opium in some form enough to quiet all pain and restlessness, but no more than is absolutely required. Brandy and ice, *if indicated*, not as a routine practice, milk and food as soon as the patient wants it, generally on the second day, at first in small quantities every two or three hours. The bowels are moved on the seventh or eighth day, as soon as the stitches are out, by a simple laxative and enema.

The results have not been as good as some operators, notably in England, have obtained; but the reasons for the failure in the fatal cases have, I think, been clearly given.

MASTOID DISEASE—ARTIFICIAL PERFORATION OF THE BONE—TEMPORARY RELIEF—DEATH FROM PYÆMIA.

By CHARLES H. BURNETT, M.D.,

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This paper contains an account of a case of chronic purulent inflammation of the middle ear, inducing general increased vascularity of the pyramidal part of the temporal bone, hyperostosis of the outer wall of the mastoid portion, and a thinning of the sigmoid groove, without necrosis. The mastoid cavity became filled with cheesy débris, and this furnishing a pyæmic source, embolism of a chronic form ensued, as shown first by the abscess in the lung and then by the pyæmic infiltration of the liver resulting in a vast number of abscesses. The operation, it will be seen, gave temporary relief to the acute aural and mastoid symptoms, but, of course, had no effect upon the pyæmic element in the case, because of the great chronicity in this latter respect. An early operation, perhaps years before, might have prevented the accumulation of cheesy masses in the mastoid antrum and the consequent occurrence of pyæmia.

History.—James B——; thirty years old; born in Ireland; a weaver, was admitted to the Presbyterian Hospital, Philadelphia, April 11, 1877. His aspect was phthisical but he stated that his health had always been good until within ten weeks, when he was admitted to a hospital for "pleurisy." He remained there seven weeks, when he was dismissed cured, as he was told. Immediately following his sojourn in the aforesaid hospital his right ear became painful and sore to the touch, the auricle stood out from the head and the pain in and about the ear was so great as to deprive him of sleep. After enduring this suffering for two weeks he was admitted to the Presbyterian Hospital, where I examined him, and obtained the above history, on April 13, 1877. At this time his right auricle was standing far out from the head, the mastoid region was red, boggy, and tender on hard and deep pressure. His pain was chiefly and constantly in the mastoid; but at times there was a dart of pain into the right temple. An offensive, thin, transparent yellowish matter flowed copiously from the painful ear, and examination revealed a largely perforated membrana tympani and a macerated and tender auditory canal with granulations on the posterior wall. The watch could be heard only in contact. The patient stated that this ear had been affected for many years with discharge and that at times he had attacks of pain and soreness similar to this, but that no attack had been as severe as this last one. His pulse was 88; appetite good; secretions normal, no cerebral symptoms. Four leeches were now applied to the mastoid region and four or five ounces of blood were drawn. This gave but slight relief, and at bedtime, a few hours later, he was obliged to have one-eighth grain morphia sulph. to get rest. He awoke from time to time with pain, and obtained some ease with two-eighths grain more of morphia.

April 14th.—The next morning his face was flushed; pain in mastoid very severe; pulse, 86; temperature, 98⅘; tongue coated; headache and malaise great. Afternoon: pain increasing in the mastoid; latter very tender, especially at its tip; appetite fair; bowels open; no cerebral symptoms. At four P.M. the patient was etherized, and after making an incision in the soft parts one-fourth inch behind the auricle, I perforated the outer mastoid wall with S. H. Buck's conical drill, three-fourths of an inch above the tip of the process. The severed branch of the posterior auricular artery was ligated. No pus issued from the opening thus made in the bone, but the cellular structure of the mastoid was easily reached through this opening and the cells toward the antrum were broken by a probe, thus affording an exit for retained pus. The periosteum was dissected freely from the mastoid but no disease of the outer table of the bone was found. A simple greased tent was now put into the wound thus made and the patient put to bed to await recovery from the ether narcosis. Beef-tea and milk ordered, and morphia if pain continues.

April 15th.—Appetite good; pain generally less, though the neck was sore and stiff, probably from bruising at operation. Mastoid incision suppurating and mastoid tip tender. Some frontal headache, but the great pain in the temple and the mastoid had gone.

April 16th.—I ordered six grains quinine daily; tent removed and poultices placed over the mastoid opening. Pus issues from the artificial opening in the bone. Patient sits up in bed and looks and feels much better. Has had no cerebral symptoms.

April 17th.—Ligature from artery comes away; patient comfortable.

April 18th.—Some fever this morning, with photophobia and intolerance of all sounds. One-eighth grain morphia at night.

April 19th.—Patient appearing weak and sleepless, gets a milk-punch every three hours, and quin. sulph., gr. ijss., every four hours, with morph. sulph., gr. ⅛, two or three times in the night.

April 20th—This morning has less fever and less pain; discharge free and purulent, from mastoid opening and from the meatus. Urine contains no albumen.

April 21st—Less fever and no pain; discharge from wound diminishing.

April 22d–23d.—Appears to be getting well; wound in mastoid healing.

April 24th.—Ten days after operation is able to get up and dress himself and walk about the ward; stimulants stopped. In the evening began to complain of general malaise; his temperature rose and his pulse became more frequent; tongue dry.

April 25th.—Remains in bed; whiskey and quinine resumed, pulse full and bounding; temperature, 104.6°; bowels confined; whiskey stopped and a fever mixture given; wakeful and nauseated all night.

April 26th.—Tongue dry and brownish; constant nausea and vomiting; *complains of pain in region of the liver.* Violent chill in afternoon. Is taking brandy and soda, and two and a half grains quinine every three hours.

April 27th.—Tongue is better, but still complains of nausea and pain in stomach and over the liver; fever continues. Discharge from the wound and ear less, very little pain and soreness in mastoid, wound nearly healed.

April 28th.—Bowels inclined to be relaxed through the night. Temperature, 104°; delirious during night.

April 29th.—Tongue dry and brown; pain and tenderness in hepatic region great. Hiccough, vomiting, and delirium. Pulse more rapid and weaker; respirations very rapid; coma. Death at 1.30 A.M. on April 30th.

Post-mortem examination, fifteen hours after death.—The omentum in proper position, but darkened by venous congestion and at its upper and right hand side thickly studded with flakes of recent lymph. The stomach was marked externally by patches of lymph over the fundus and at its pyloric end was adherent to the under surface of the liver. The duodenum firmly adherent to contiguous viscera and so softened as to be torn in attempting to remove it. The liver was covered externally with peripheral abscesses, like yellow spots, varying from one-fourth of an inch to one inch in diameter. The spleen contained no abscesses. The liver was found filled with disseminated abscesses throughout its parenchyma. The left lung was normal excepting the presence of small abscess on outer side of lower lobe, one-half inch in diameter, surrounded by hardened zone, the whole one to one and one-half inch in diameter. Brain: The cerebral surface of the temporal bone of the diseased side was slightly darker than its fellow, and the dura mater not so adherent as on the normal side. The tympanic cavity and mastoid cells were filled with a cheesy mass; the ossicles were present; membrana tympani largely destroyed. There was great hyperostosis of the outer table of the mastoid portion; it was half an inch thick at a point three-fourths of an inch behind the external auditory meatus. There was no necrosis of any part of the temporal bone; no sign of phlebitis, nor of thrombosis in the sinuses of the brain, nor in any of the veins leading from the tympanum. The cheesy mass in the mastoid cells was lying against the mastoid surface of the bony gutter in which runs the lateral sinus, but there was no necrotic spot in this bony channel. Numerous evidences of extensive chronic disease in the temporal bone were found, consisting in the great thickening of the outer wall of the mastoid, as stated already, and in a thinning of its inner wall where in contact with the sigmoid sinus. The nutrient vessels and the canals conveying them in this region of the temporal bone were much wider and larger than on the healthy side. It seems highly probable that the embolism occurred by the way of the lateral sinus, in consequence of the morbid changes in that region, just narrated.

Conclusions.—1. This man died of pyæmia induced by long continued purulent disease in the middle ear and mastoid cavity. The embolic elements passed by the brain to lodge in the lung and liver, an unusual course in pyæmia from ear disease. 2. The operation of trephining or perforation of the outer mastoid table is strongly indicated in such cases. It has no effect whatever in hastening a fatal issue, even if it had no effect in preventing it, as shown in this case, as the man recovered from the operation to die of pyæmia. 3. When fistulous openings exist in the upper back part of the bony auditory canal, as in this case, it becomes worthy of our consideration whether we should not follow the indication of nature and make a larger opening at such a point, especially as we may in such cases suspect hyperostosis of the outer wall of the mastoid. 4. The safety of the operation on one side, and the great dangers of a concealed pyæmic nidus in the mastoid, in chronic purulent otitis media, on the other hand, should incline us to regard, in many cases, a prompt opening of the mastoid wall as the one great chance of saving the patient's life.

How to Get Back?—A correspondent from the dispensary department of the New York Infirmary for Women and Children reports an individual of the *Cimex lectularius*, or common bed-bug, found perched upon the external os of the cervix uteri in an abundant vaginal catarrh. The insect was removed and was unmistakably identified.

A FATAL CASE OF TYPHLITIS WITHOUT RECOGNIZABLE SYMPTOMS.

By JOSÉ M. FERRER, M.D.,
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The desire to contribute, however slightly, to the general fund of information on the subject, together with certain features of practical interest, must form my apology for putting the following case on record.

S. J. M—— was a stout, healthy girl, nineteen years of age. Despite a history of phthisis on both sides of the family, no constitutional taint of weakness marred her perfect physiological life. Aside from rubeola and a few trifling ailments in her earlier life, she had never been sick.

I was called to see the patient about midnight on Saturday, June 2, 1883. She had been visiting her friends all day, and on her return home nothing unusual was noticed, except that she complained of slight headache and of being tired out. At 6 P.M. she ate no dinner and seemed exceptionally quiet. After dinner she laid down on the lounge, and, as I learned after her death, called for a blanket, saying she felt cool, as the windows were open, the evening being warm. About 8.30 P.M. she commenced to vomit, at first but sparingly, and almost simultaneously she was taken with a *severe pain in the epigastric region*, which she localized by placing her hand on the "pit of her stomach." The vomited matters were almost entirely bilious. There seemed to be reflex irritation of the rectum, for she tried to go to stool twice, passing very little. Palpation and percussion of the abdomen revealed nothing special. The pain seemed to abate somewhat after one drachm of the U. S. solution of morphia, and there was no vomiting for about an hour. Later, another drachm was administered, but was vomited almost immediately. Despite counter-irritation of the abdomen, emesis continued at intervals. When I left her she seemed more quiet, the symptoms abating. A warm poultice was applied and she fell into a doze.

Sunday, June 3d.—I called about 9 A.M. and found the patient more comfortable. She complained of *soreness about the epigastrium*, but said she did not have the pain like the previous evening. The sore and tired feeling were attributed to her continued efforts at vomiting. I asked about the menses and she said they were "all right." I asked if she had any pain down the bottom of the abdomen, and she said no. I again palpated the abdomen all over but discovered nothing, and caused some discomfort. No tympanites; no signs of a hernia. Pulse, 90. Temperature not taken, as there was no thermometer at hand, but there was evidently no fever. Auscultation of the chest with negative results. She did not give indication of being very sick. She insisted on sitting in a chair by her bed for a while, and walked across the room two or three times to the *pôt de chambre*. Through the day she vomited considerable quantities of bile, and some teaspoonfuls of beef-tea which she had taken. In the evening her temperature was 38¼° C., and pulse 90 to 100. She looked pretty well, and, ordering a sponge-bath and a large poultice, which she kept on all night, I left her.

Monday, June 4th.—I saw the patient about 9.30 A.M. She seemed in good condition. Had slept part of the night. Temperature, 100° F.; pulse, 90. She still complained of some soreness of the abdomen but no pain, and more like a sense of weight; she said, "It feels so heavy." All vomiting had ceased. She sat in a chair for a while, and did not seem to desire absolute rest. She received some friends in her room that afternoon and spoke cheerfully with them. When in bed she lay covered with a blanket and coverlet. Her cheeks now became flushed and she had much thirst. In the evening when I called her temperature was 103° F. and pulse, 120. This was the highest record at any time and occurred only on this one evening. Vomiting not present;

pain not spoken of. *No tympanites.* Lips parched and face flushed; urine high colored. She seemed somewhat apprehensive, and wanted me near her, but appeared at the same time good-natured, and even smiled. Fearing to induce vomiting anew, no quinine was ordered. Only sponge-baths and cold lemonade when she should want it.

Tuesday, June 5th.—At 9.30 A.M. temperature had gone down to 100⅘° F. and pulse to 100. The flush had faded from the face. Emesis had not recurred. The sense of weight was only referred to on repeated questioning. The respirations began now to be quickened, thoracic, and not deep. No morbid signs in the chest. Condition remained about the same through the day, with same range of temperature, and pulse varying from 100 to 110. The lips were parched and glossy. In the afternoon she commenced to have a clammy perspiration, and the extremities were cool. In the afternoon, also, tympanites developed, but moderate only, and flatus was voided, later there was some hiccough and the respirations continued quick. With all this, her condition did not manifest the imminent peril in which she was. She walked from her bed to another room. In this room she walked from the bed to a chair across and sat down, after a while she moved again to a lounge; and, though not talkative, followed the conversation and answered opportunely. She no longer mentioned the pain or soreness. There had been no vomiting that day or the day before. That evening the temperature was, as in the morning, 100⅘° F., and pulse 110 and weak, respirations about 30. The room was close and warm. She tossed about in bed a great deal. I left her at 10 P.M., as she said she was going to sleep, and asked me to call early in the morning, she was then bathed in a cool sweat, but seemed in fair condition. During the night she had three movements, passing a very small amount of fæces highly colored with bile. She had refused all nourishment.

I was summoned hastily at about 3 A.M. on Wednesday, June 6th, and found the patient going rapidly into collapse. Once previous to my coming, and twice subsequently, she vomited large quantities of dark-brownish pseudo-stercoraceous matter. She had hiccough, cold extremities, small pulse, and other signs of collapse. Dr. Satterlee was called in consultation, but there was little to be done at such an hour. It was evident she was *in articulo mortis.* She complained of vertigo, the bed's turning around, etc.; she began to wander and soon became unconscious. Despite active stimulation, she died in collapse at 4.30 A.M.

Post-mortem examination, by Professor Delafield, eight hours after death, Dr. Satterlee and myself being present. The body was well nourished and external inspection revealed nothing special. Rigor mortis present. Only the abdominal cavity was examined. The evidences of a general acute peritonitis were discovered at once. The stage was an early one, the bright arborescent condition of the vessels being still preserved. There were some delicate fibrinous adhesions forming. At the bottom of the abdominal cavity there were probably two ounces of purulent serum. The intestines were full of gas.

On pulling up the cæcum into view, the vermiform appendix was discovered free in the abdominal cavity, and acutely inflamed. It was increased in size to probably four times its original diameter, and was about four inches long. It felt hard to the touch, and remained erect. Its posterior and interior aspect presented a yellowish, sloughy appearance. Here, then, was the original cause of the trouble. Further inspection revealed a small mass of hardened fæces, about the size of a small bean, as the foreign body. There was no perforation proper, but the walls of the appendix were softened and infiltrated with pus.

Remarks.—There are several aspects of the case that merit consideration and study.

To commence with the *etiology.* Here was "a small mass of hardened fæces about the size of a small bean" impacted in the vermiform appendix. Examination failed to discover any foreign nucleus to this mass. Its own consistent hardness was sufficient to strangulate the appendix, or at least to cause a most marked inflammation thereof.

Now, in the healthy subject fæcal matters find their way in and out of the appendix without inconvenience. And for a purely fæcal mass of sufficient hardness to cause an acute inflammation, we would predicate marked constipation, particularly if we excluded the possibility of the little mass hardening *in situ* without causing previous symptoms. Such, indeed, is the view held by all writers on the subject. To quote one: "Most frequently," says Bauer ("Ziemss. Cyclop.," art., "Infl. Proc. in the Right Il. Fossa."), "we meet with irregularities of the bowels; either constipation has existed for a long time, or this has alternated with diarrhœa, until finally obstinate constipation has become established." "It is true," Bristowe says ("Reynolds' Syst. of Med.," art., "Dis. of Cæc. and App. Verm."), that "the concretions . . . consist obviously of the admixture, in unequal proportions, of ordinary fecal matters, and of the secretions from the mucous membrane of the appendix, and have obviously formed in the situation in which they are found, either round a nucleus of solid matter which has been first precipitated and concreted there, or round some comparatively small body of extraneous origin." Here we find no direct allusion to constipation as a primary cause, but it is fair to conclude that the inference flows from the well-known fact that "one of the physiological phenomena of this portion of intestine is that its contents become more solid and remain a long time in it," and that "there are a number of circumstances which may induce the contents to remain for a much longer period than usual, and in connection with this to become very hard" (Bauer, loc. cit.). Else, how explain the "nucleus of solid matter which has been first precipitated and concreted there?" Constipation, then, is presupposed when we do not deal with the impaction of extraneous bodies.

But, according to her own statement and that of her family, this girl did not suffer from constipation; and the slight amounts she passed during her short illness were of the ordinary pasty consistency, while the necropsy revealed the cæcum and colon remarkably free from fæces. Was this particular bit of such hardness that the appendix could not get rid of it, as it does of other matters, it possessing normal tonicity, the girl being in perfect health? And if so, why should it have differed from the rest, which was voided naturally and seemed of ordinary consistency?

I can offer no explanation, and merely state the fact that, without a previous history of constipation, a little mass of hardened fæces without a foreign nucleus was found impacted in the cæcal appendage, having caused it to become acutely inflamed, that an acute general peritonitis resulted therefrom, and the patient died.

The general process in the peritoneum was by extension, no perforation proper having occurred. After reciting several cases, Dr. Copland ("Dict. of Prac. Med.") says: "From the history of these and other cases, which have occurred to me and several of my medical friends, it may be inferred that inflammation, affecting primarily the cæcal appendage, is most frequently brought on by hard substances having escaped into it; and that the inflammation rapidly extends to the peritoneum, giving rise to the exudation of albuminous lymph, to adhesion of its opposite surfaces, and of the appendix to adjoining parts, and to gangrene of this process."

Finally, all authorities are agreed that typhlitis occurs much more frequently in males than in females. The foregoing case is offered to add to the statistical record of typhlitis in the female.

Clinical history.—It is in the history that we find peculiarities. And it bears out the experience which is

daily increasing and becoming more recognized, that a patient may appear to be but slightly ill while suffering from a fatal peritonitis.

Speaking of diseases of the cæcum and its appendage, Dr. John Burne says ("Royal Med. and Chir. Trans.," vol. xx.): "The diseases in question are, nevertheless, of frequent occurrence, are always dangerous, often fatal, and characterized by a train of symptoms so peculiar and marked as to render the recognition of them certain and not difficult." In view of the foregoing case, I would take issue with the last broad statement. For this girl gave absolutely no manifestations of typhlitis during life. Contrast the vivid picture given by Copland (loc. cit.)—who, according to Bartholow (*Amer. Jour. Med. Scien.*, October, 1866, art., "Typhl. and Perityphl."), has written the best article on the subject, and which account is an exponent of the typical history, accepted as such by all practitioners—with the blank presented in this history. "Very acute pain," he says, "tumefaction, and tenderness are complained of upon the invasion of this form of the disease, first in the right iliac region, and subsequently more or less over the abdomen, with excruciating tormina, obstinate constipation of the bowels, a very frequent, small, or contracted pulse, heat of skin, dry tongue, great thirst, sometimes with numbness of the right leg, or pain shooting down the thigh, and retraction of the testicle. Vomiting comes on sooner or later, and is often, at one period or another, attended by the discharge of matters from the small intestines—at least in the cases I have seen. The patient at last becomes restless, his countenance sunk, and a fatal termination takes place, generally from the third to the sixth day, preceded by the symptoms ushering in dissolution from intestinal peritonitis."

Bauer says (loc. cit.): "The diagnosis rests most prominently on the painful tumor in the region of the cæcum, and further, on the previously existing symptoms, and the symptoms of circumscribed peritonitis which are subsequently developed in connection with the tumor." Burne (loc. cit.) says practically the same thing.

In the present case there was no apparent constipation. Discomfort, pain, or tenderness were *never once* localized in the right iliac region. Even upon direct questioning, pain anywhere in the lower portion of the abdomen was denied. On the contrary, whenever she complained at all, even in the beginning, it was about the epigastric region, and never anywhere else. Palpation, often performed during her illness, revealed no local tenderness, but rather a generalized discomfort. Neither was a tumor of any description discovered. No such "painful tumor near the cæcum," as dwelt on by Flint ("Prac. of Med.") and described in Jackson's "Letters to a Young Physician," was present. And, moreover, the autopsy proved that none such could have been felt, there being no typhlitis stercoralis (accumulation of fæces), the appendix being behind the cæcum, it being the only organ markedly enlarged, and there existing no salient perityphlitic deposit.

Now, in this case, again, there was no distinct positive history of peritonitis itself. With regard to the pain, we are taught to expect it as a rule, violent, continuous, increased by the slightest pressure, and relieved only by opium. Exquisite tenderness we count on. And our mind pictures the patient lying motionless on his back, with his knees drawn up, an anxious expression on the face; the slightest interference with the abdomen causing agony, even the weight of the bedclothes being resented. Fever, with a temperature of 105° F., or more; pulse, 120 to 130. We look for tympanites early, and usually get vomiting. Great general prostration is the rule. Now, what did we have? Pain there was, but only in the beginning, and apparently localized about the stomach. It was not complained of for the last two days. "Sometimes," says Dr. Wardell ("Reynolds' Sys. of Med.," art. "Perit."), "that cardinal symptom, pain, upon which such emphasis has been laid, only obtains at the outset; and notwithstanding its subsidence the malady goes on."

Tenderness and increased pain on pressure were not present to any great extent. Witness the number of times palpation and percussion were permitted, for the last time, on the eve of her death, and this with slight discomfort only. The abdominal muscles were not relaxed, and never did she lie with knees drawn up. She had a large poultice on all night and part of the next day, and was always covered with a blanket and coverlet which rested on the abdomen.

The pulse was 90 and thereabouts, except on the second evening and at the last, regular and of good quality. Wardell (loc. cit.) says: "The pulse is not always, however, a sure guide, as most serious attacks may be progressing under all conditions of the arterial circulation; and even pain on pressure—the most trustworthy of all individual symptoms—is not invariably to be relied upon, because it is not uniformly commensurate with the amount of lesion which really obtains."

The highest temperature occurred on the second evening, the thermometer marking 103° F., certainly not a high record for the intense and sthenic peritonitis discovered post-mortem.

Tympanites occurred only on the afternoon of the last day, and then not prominently.

For the last two days all vomiting had ceased.

But it is in the *tout-ensemble* of the disease-picture—the deportment, expression, prostration, etc.—which serves as an index to the laity, and which is of wondrous aid to the physician himself, that marked lines failed to convey the actual condition of the patient.

There was no Hippocratic countenance, only a relative degree of seriousness compatible with simple malaise. The patient did not seem to desire absolute rest. On the contrary, she moved about from the bed to the chamber, from bed to chair, from chair to lounge, from room to room, and this even until a few hours before death. She did not seem much prostrated, except at the last, and altogether her general condition did not indicate her impending dissolution. She was sick but three days and eight hours.

We may conclude with the words of Prof. Thomas ("Dis. of Wom.," fifth edition, p. 494): "With reference to general peritonitis, it may be stated that, on the one hand, it, of all diseases, may declare itself by the most numerous and characteristic symptoms, or, on the other, run its fearful course with the greatest obscurity, so as to mislead the most careful diagnostician, even up to its latest stages."

Prognosis.—Under the circumstances an uncertain prognosis only could be given, and there were not the elements for a fatal one till very late in the disease.

Treatment was entirely symptomatic. But it is more than doubtful that any treatment would have availed, the cause being not removable.

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The Tongue at the Vault of the Pharynx.—Dr. J. J. Buchanan, of Pittsburg, Pa., writes: "Three cases have been recently reported in The Record of persons, who are able to explore the vault of the pharynx with the tip of the tongue. From the absence of any known record of similar cases the inference was drawn that such instances are rare. The following additional case has since come under the observation of the writer: W. M——, male, student, about twenty-three years of age, in the course of a laryngeal examination developed the fact that he could easily pass his tongue behind the *velum palati*. He was able to outline the vault of the pharynx and the posterior nares and to move forward a probe passed along the floor of the nasal cavity. The frenum was poorly developed, but he could give no history of its section."

ON THE MANAGEMENT OF CASES OF IRITIS.[1]

By CHARLES J. KIPP, M.D.,

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In the treatment of all of the different forms of iritis, from whatever cause, the chief indication is to secure complete dilatation of the pupil, and to maintain the same for some time after all inflammatory symptoms have disappeared. If the case is seen within a few days after the first symptoms have manifested themselves, a few drops of a one per cent. solution of the sulphate of atropine instilled four or five times in intervals of five minutes, will generally break up any adhesions which may have formed between the pupillary margin and the anterior capsule of the lens, and produce a widely dilated, round pupil. After this result has been obtained, the instillation need be repeated only sufficiently often to maintain the dilatation, which is usually accomplished by four to six instillations daily.

If, as is very rarely the case, the instillation of the sulphate of atropine produces symptoms of poisoning, such as redness of skin, dryness of mouth and fauces, great thirst, a quick and weak pulse, palpitation, headache, ischuria, etc., the passage of the atropine into the pharynx should, if possible, be prevented by pressing firmly on the lachrymal sac each time the drug is instilled, and if this is not successful in preventing the poisoning, some other mydriatic must be substituted. The sulphate of duboisine, the sulphate of hyoscyamine, daturine, or the hydro-bromate of homatropine may be used for this purpose. Of these the duboisine is probably most extensively used, as it is more certain in its action on the pupils than the others; but unfortunately it is apt to produce constitutional disturbance in the very cases which have an idiosyncrasy against atropine. Duboisine and hyoscyamine should be used in solution containing not more than two grains to the ounce. Homatropine I have used somewhat extensively in children, and have never seen symptoms of poisoning follow its use. Its effect on the pupil is, however, much more transient than either of the other mydriatics mentioned, and it is therefore necessary to repeat the instillation very often. I have generally employed it in one or two per cent. solutions.

The prolonged use of any one of the mydriatics here mentioned occasionally produces considerable irritation of the conjunctiva and inflammation of the integument of the lids. In some cases I have seen a well-marked follicular conjunctivitis and an inflammation of the skin of lids and cheek closely resembling erysipelas follow their use. In such cases it is best, if it can be safely done, to suspend the use of mydriatics altogether for a while, and to apply a one per cent. solution of nitrate of silver, or sulphate of zinc to the conjunctiva, and an ointment of the oxide of zinc, or the acetate of lead to the skin until the irritation has subsided, and then to resume the same or some other mydriatic. If all of the alkaloids mentioned cause irritation, a strong, well-filtered watery solution of the extract of belladonna may be substituted. Notwithstanding the disadvantages here mentioned of atropine, I think that on the whole it is to be preferred to all other mydriatics.

In cases of iritis of long standing, in which the tissue of the iris is swollen and infiltrated, and the pupil much contracted, the one per cent. solution of the sulphate of atropine, instilled in the manner described, will, however, not only occasionally fail to make much of an impression on the pupil, but will in some very rare cases even increase the irritability of the eye. Under such circumstances it is advisable to instil the atropine solution not more than five or six times daily, and to employ at the same time other measures to diminish the congestion and swelling of the iris. Of the various measures used for this purpose, none has, in my own hands, given more satisfactory results than local abstraction of blood by means of four to eight leeches applied to the temple. In many of my cases in which, before the application of the leeches, atropine failed to act, complete or at least partial dilatation followed the leeching, and this took place often before the instillations were resumed. In localities where leeches are scarce, or in cases where it seems desirable to avoid the disfigurement resulting from the little scars, Fischer's plan of making a single leech do the work of many may be tried. It consists in making a long incision in the side of the leech after it has well filled itself. It is said that a leech thus treated will take from one to two ounces of blood if the wound in its side is kept free from clots. After the application of the leeches the patient should be kept in bed, or should at least remain quietly in a darkened room for twenty-four hours, or longer. If only slight improvement follows the leeching, it can, if necessary, be repeated several times, at intervals of several days. In cases in which the leeching is contra-indicated by marked anæmia, a considerable reduction in the congestion and the swelling of the iris is sometimes brought about by the action of a brisk cathartic, and the continued application of hot-water compresses to the eye. In some cases in which leeching had had but little effect, I have seen dilatation of the pupil follow shortly after the patient had taken a Turkish bath. The measures here mentioned will in the great majority of cases of iritis, if the case is not of more than a week's standing, suffice to break up all or at least most of the posterior synechiæ; and when this has been accomplished the back bone of the disease is broken, and nothing remains to be done but to keep the pupil dilated for some weeks after all circumcornal injection has disappeared, and to prevent the patient from using his eyes during this time.

But, if after a fair trial of these remedies no marked improvement in the condition of the eye is apparent, or if at any time gummy tumors begin to grow out of the iris, some form of mercury should be administered. Inunction with blue ointment or the oleate of mercury is to be preferred in most cases; but, if there are objections to its use, the bi-chloride, the proto-iodide, calomel, or blue pill may be prescribed. In whatever form the mercury is given, great care should be taken to avoid salivation. As a rule, the use of this remedy should be continued only till the swelling of the iris has subsided and the exudation in the anterior chamber has been absorbed. After that, the iodide of potassium may be given. In former years I used mercury much more frequently in iritis than I do now, having gradually learned from experience that atropine, leeches, and warm fomentations will in most cases break up the synechiæ, if they can be broken up at all by any means outside of surgical procedure. I have even treated without mercury quite a number of cases occurring in persons who had previously had constitutional symptoms of syphilis, and all recovered with the pupil intact and the sight unimpaired. I have also seen a very large gumma of the iris disappear under the iodide of potassium; but it is only fair to add that it did not prevent the development of other gummata in the same eye some months later. I mention this merely to show you that mercury is by no means imperatively called for in iritis occurring in syphilitic patients. Unless other manifestations of syphilis are present at the time, the iritis will require no other treatment than the non-syphilitic variety; but, if constitutional symptoms are present, they should of course be treated in the usual way. I never withhold mercury if I think that the condition of the eye demands it, but I do not give it in any case simply because the patient tells me that he had a chancre. In such a case I at once search for symptoms of syphilis, and if any are found I treat them either with mercury or iodide of potassium; but, if no other manifestations are present, I treat the iritis in the same way as I would in a patient who has never had syphilis.

For the relief of the pain which is so frequently pres-

[1] Read before the Medical Society of New Jersey.

ent during the early stages of an iritis, the repeated application of leeches to the temple is sometimes advisable, even if the pupil is widely dilated; and this plan is to be especially recommended in cases in which morphine does not act pleasantly. Morphine, with or without the sulphate of atropine, should always be given in sufficient doses—either hypodermically or by mouth—to allay pain and produce sleep at night. The hydrate of chloral will answer for the milder cases. During the last few years I have often given the salicylic acid in medium doses with gratifying results in cases of iritis accompanied by much pain in and around the eye, and especially when symptoms of rheumatism were either present or had preceded the eye trouble. Should this remedy fail, quinine may be tried, either alone or in combination with morphia. In my own hands, quinine has been especially useful in cases of iritis associated with gonorrhœa. If the pain is due to an increase in the tension of the eyeball (a symptom not unfrequently seen in severe cases of so-called serous iritis), and none of the remedies mentioned give relief, paracentesis of the anterior chamber should be resorted to. The opening is best made with a lance-shaped knife or a broad needle, at the outer margin of the cornea, great care being taken that the instrument is not pushed far enough in the chamber to wound the iris or the capsule of the lens. If necessary, this little operation may be repeated daily for several days. In nearly all cases of iritis, considerable relief from pain is also obtained from the application to the lids of cloths wrung out of warm water or a warm solution of morphine and atropine. In a few cases the application of iced cloths will be found more soothing to the eye, and the choice between the two may therefore be left to the patient.

Rest in bed in a darkened room, although perhaps not essential to complete and speedy recovery in the milder forms of iritis, should be insisted upon in all cases in which there is much pain, œdema of the lids and ocular conjunctiva, much exudation in the anterior chamber, or a marked increase of tension. In cases of great severity, some relief is also occasionally obtained from gentle diaphoresis; and, as no harm can possibly be done by stimulating the cutaneous secretion, remedies producing this effect may be given in combination with any of those otherwise indicated. Jaborandi, or its alkaloid pilocarpinum, I have occasionally used with apparent benefit in cases in which there was much œdema of the ocular conjunctiva and much exudation in the anterior chamber; and also in cases with marked increase of tension—cases, in fact, in which the inflammation was not confined to the iris, but extended, in all probability, to the ciliary body and the choroid. Of late I have given the pilocarpin exclusively by hypodermic injection. The iodide of potassium, in five to twenty grain doses, is also very efficacious in the same class of cases. An iritis occurring in the course of other diseases—such as syphilis, gonorrhœa, rheumatism, gout, diabetes, smallpox, and so forth—requires no other treatment than that outlined here, care being taken, however, to select for internal use only such remedies as are known not to have an injurious effect on the general disease. That the general disease is to be treated in the usual way is self-evident.

As long as the eye is at all irritable, all close work should be strictly prohibited, even if but one eye is affected; and in order to guard against relapse as much as possible, only a very cautious use of the eye should be permitted for some months afterward.

With regard to the treatment of the results of an iritis, my advice is not to interfere unless the pupil is excluded—that is, the entire pupillary margin is fastened to the lens capsule. In this condition the iris is soon bulged forward by the fluid effusion between it and the lens capsule, and secondary glaucoma follows. As soon as the bulging of the iris is noticed, a large piece of iris should be excised. No other treatment will be of any avail. An iridectomy may also be made in cases in which numerous and broad posterior synechiæ appear to be the cause of relapses of iritis, although this operation is by no means a sure prevention. Of the several operations devised for the purpose of breaking up posterior synechiæ, without excising iris tissue, I will only say that none but the most skilful operators should undertake them; of their value I am in doubt. Various modes of treatment have been suggested for preventing relapses, and I have tried them all, only to be disappointed in them all. Relapses will occasionally occur in spite of all the remedies recommended.

ULCER AND FISSURE OF THE RECTUM.

By F. W. SMITH, M.D.,

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SOME recent experience in treating diseases of the rectum leads me to think that few diseases of equal importance are so apt to be wholly overlooked by the general practitioner.

I believe that in the female many cases of supposed uterine or bladder trouble, or obstinate constipation, or perhaps chronic diarrhœa, have been unsuccessfully treated, when, if a proper examination of the rectum had been made at the first, the patients could have been saved months, and perhaps years of painful suffering. In the male it is not impossible to mistake rectal disease for beginning cystitis, vesical calculus, enlarged prostate, or urethral stricture. And these mistakes are made not infrequently and by good physicians, not because they are incompetent to make a diagnosis, but rather because of carelessness, or perhaps because their attention is not often attracted by patients afflicted with rectal disease. For some reason a physical exploration of the rectum is rarely thought of unless symptoms point almost positively and exclusively to its disease, while the uterus and urethra are frequently subjected to the most rigid examinations when no symptoms point to local trouble, either functional or organic, with a view of determining if there is not some local derangement which may, through reflex irritation, be the cause, perhaps, of an irritable cough or some other complicated disorder the origin of which is difficult to understand.

The most common disorders met with in the rectum are ulcer and fissure, and although trifling in point of size and pathological relations, they are of great practical importance both on account of the excessive amount of local pain and the constitutional disturbance and irritation to the nervous system which the patient may suffer. As illustrating some of the striking phenomena which are presented by the above-named disorders, I will report three cases such as are liable to fall into the hands of any practitioner, and which are only a fair sample of others which have come under my notice.

CASE I.—November, 1881, there appeared at my office for treatment a Mr. O——, a young man twenty years of age, apparently of strong and vigorous constitution, who said that until his present trouble began he had never been sick for a day.

About two years before he came to me he commenced to have pain of a severe lancinating character, which he located principally about the neck of the bladder, but sometimes darting backward to the sacrum or radiating down the thighs. At first the pain was only occasional, occurring once or twice during the day or night, the paroxysms gradually becoming more frequent until his pain was almost constant.

Defecation became very painful and difficult, notwithstanding that during much of the time the bowels moved frequently and the stools were soft.

Perhaps his most distressing trouble was his almost constant desire to urinate, which act also excited no little pain. For more than a year he had been obliged to pass his water as often as every hour, night as well as

day. About six months before he came to me he underwent an operation for stricture of the urethra, and although his urethra was made proper size, none of his unpleasant symptoms were relieved, but continued to grow worse, and when he came to me he was indeed in a pitiful condition. The countenance was pale, anxious, and careworn, and his expression indicative of constant suffering.

The constitutional disturbance and irritation to the nervous system had been very great, and his condition was such that his father and brother expressed to me fears that his mind was even becoming affected. I examined the rectum and found two large ulcers situated about two inches above the margin of the anus, one anteriorly, oblong in shape, and occupying a space a little smaller than a silver quarter. The other, about half the size of the first, situated posteriorly. Both presented much the same appearance. They were deep, with edges sharply defined.

After stretching the sphincter moderately, I touched the ulcers lightly with the nitrate of silver and prescribed suppositories of iodoform and belladonna to be used at night. The young man returned the next day, saying he had not spent so comfortable a twenty-four hours in more than two years.

I continued the above treatment, moderately stretching the sphincter two or three times a week, and at the end of two months he was relieved of all his unpleasant symptoms and the ulcers healed.

Case II.—Mrs. R——, twenty-eight years of age, has the appearance of being strong and healthy, and is a woman of good habits. Has had three miscarriages, one at the fourth month and two at the sixth month of utero-gestation.

I first saw her on the morning of September 10, 1882, when she was threatened with another miscarriage at about the sixth month. She was extremely restless and had been having periodical pains for the past ten hours, with now and then a little hemorrhage.

I began to think abortion inevitable and to think of the safest and best means of hastening along the work which had evidently already begun, but being naturally of a conservative disposition, I made haste slowly. I inquired carefully into her previous history, to see if I could find any possible cause for this as well as her former miscarriages; but in my efforts to this end I failed completely, except that I obtained a history of obstinate constipation, with painful defecation and the occasional passage of a little blood, which trouble extended back over a period of more than three years. I began to suspect that my patient had disease of the rectum, the examination of which might reveal the cause of her present trouble. Introducing into the rectum my index finger, I found the sphincter muscle in rigid contraction, also three fissures about equally distant from each other, and extending upward from the margin of the anus for about two inches. I stretched the sphincter moderately and touched the fissures lightly with the nitrate of silver and gave no opiate or sedative of any kind. Returning the next day, I found her very comfortable; her pains had ceased almost immediately after my operation of the day previous, and with no treatment other than attention to the rectum she went on to full term, and on December 20th she gave birth to a strong, healthy male child, weighing ten pounds.

Now, I firmly believe that the fissure and spasm of the anus, from which this woman suffered, were the cause of her three previous miscarriages, and I have not the slightest doubt that she would have aborted this time had not she been relieved of the old irritation and exciting cause.

Case III.—Miss B——, aged twenty-two years, came under my treatment in September, 1882. She gave a history extending back over a period of more than two years. Her most distressing trouble was painful and prolonged menstruation. She was troubled much with chronic constipation, frequent micturition, and almost constant pelvic pain. She was also very anæmic and suffered from headache and extreme nervousness.

About a year before she had undergone an operation for stenosis of the cervix uteri, but had obtained no relief.

I instituted a careful examination, and aside from a general hyperæmia and hyperæsthesia, the uterus and its appendages were in a normal condition.

Exploration of the rectum revealed an irregularly shaped ulcer, a little larger than a dime, situated anteriorly about two inches above the anal orifice. With no treatment other than attention to the rectum, and the use of a ferruginous tonic, she was in a few weeks restored to good health.

In the treatment of the above named rectal troubles, I have had much the best success by moderately stretching the sphincter from time to time at intervals of three or four days, in connection with some local application, than by either the operation of forcible dilatation or incision, and the former method has the advantage of being less formidable to the patient.

EARLY ENGLISH MEDICAL AND SURGICAL LEGISLATION.

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A draft of a proposed act, introduced in the early part of the present session of the Legislature, "authorizing" people to employ whomsoever they think fit as medical attendants, smells strongly of "A Bill that Persons being no Common Surgeons may administer medicines notwithstanding the Statute," enacted by Parliament in the thirty-fourth year of the reign of "our most-dread sovereign lord, Henry VIII.," just about three and a half centuries ago. Thus doth history repeat itself, for what is legislation but history compacted and crystallized? The old English statutes mark epochs of progress in the trades and manufactures, in political economy and science, in the learned professions, and what shall we say of their preambles? Between the "whereas" and "wherefore" of those sturdy acts is frequently found the only insight obtainable into contemporary history. The facts are not always reliable to be sure, but they are generally as reliable as any facts which can be obtained from other sources.

It may have been from a lack of inclination, or from a feeling that interest would not warrant it, or from a lack of space in their crowded works, that writers on medical jurisprudence have failed to treat, as it deserves, the subject of medical police. It can scarcely be said that the subject is not included in medical jurisprudence, for it is. It is perhaps a branch; if so, it has arrived at a stage of development which entitles it to a treatment of its own. There is enough material for a work on medical police—a work which might be made valuable to the legal and medical profession and invaluable to the legislator and political scientist. If such a work is ever written, an account of the early English legislation will not only be the natural beginning (unless the writer chooses to delve into the older material of the continental countries) but will also be one of the most instructive chapters. It furnishes the key to all the legislation enacted since, both in England and America, commencing with the "act for the appointing of physicians and surgeons," passed in the year 1511, the third year of King Henry VIII. The first era of legislation looking toward the regulation of the practice of physic and surgery, extends to the thirty-fifth year of Henry VIII., and during this period no less than seven statutes at large were enacted.

Dr. Ordronaux, in his "Jurisprudence of Medicine," speaks of "the earliest statute" as "a draft of an act of Parliament of 9 Henry V., A.D. 1422." Nowhere else have I found any allusion to such an act. None of the authorities on English statutes refer to it, and it is not given in Ruffhead's "Statutes at Large"—an acknowl-

edged authority. Moreover its terms are suspicious, it provided that no one should practise physic unless he had studied in a university and was at least a "bachelor in that science." If such a statute ever existed, how is it that its provision was afterward so completely undone, and why has it taken centuries of legislation to get back again? Paris and Fonblanque have given just a little discussion to police laws in their medical jurisprudence, although finally dismissing it as "but little matter of professional interest." They refer to a petition presented to Henry V., in which was set forth the advancement made on the continent in regulating the practice of medicine, and perhaps what Dr. Ordronaux calls a statute was a portion of this petition.

As to the Act of 1511, there is no doubt of its authenticity. It is constantly referred to by later acts and it seems to have been made the basis of all future legislation. It is an epoch-marking statute. When the Governor and Council of the colony of New York, in 1760, came to frame the first medical police regulation enacted in America, they evidently had this first English statute in mind.

The preamble set forth a truly outrageous state of affairs, alleging that "the science and cunning of physick and surgery is daily within this realm exercised by a great multitude of ignorant persons, of whom the great part have no manner of insight in the same; some also can read no letters on the book, so far forth that common artificers, as smiths, weavers, and women, boldly and accustomably take upon them great cures and things of great difficulty, in which they partly use sorcery and witchcraft, partly apply such medicines as be very noxious and nothing meet therefore, to the high displeasure of God, great infamy to the faculty, and the grievous hurt, damage, and destruction of many of the king's liege people." Consequently the ban of the law was laid upon "smiths, weavers, and women," and all persons were forbidden to practise physic or surgery in London or seven miles around, unless examined and admitted by the Bishop of London or Dean of St. Paul's, assisted by four chosen physicians or surgeons. In other parts of the realm practitioners were to be examined by the bishop of the diocese, assisted, if he chose to call such, by experienced professionals.

This Act was subject to great abuse in the bishoprics, by reason of the supreme discretionary authority invested in the bishops. It remained unchanged until 1522, when the Act was passed incorporating the physicians of London. The king had already issued letters patent to that body in 1518, for the "due exercising and practising of the Faculty of Physick and the good ministration of medicines." This patent was ratified and enlarged by the statute, which recited a necessity for practitioners to be "profound, sad and discreet, groundly learned, and deeply studied," and therefore the work of examining and admitting them was turned over to the corporation—a proceeding which undoubtedly made candidates "sad" enough. The governing body consisted of eight "elects" vested, among other things, with the power of examining in London persons wishing to practise in any part of the realm.

Very early in its history the "Faculty of Physick" in London began to assume a powerful legal status. In 1540 its authority was made more autocratic by the Act "For Physicians and their privileges," which was procured through a petition which the corporation transmitted to Parliament. The petitioners knew how to excite a lively interest in their prayer, reciting that "divers of them many times having in care some of the lords of your most honorable council." The argument was so irresistible that henceforth physicians were exempted from keeping "watch and ward and to be chosen to the office of constable." The corporation was authorized to appoint four of their number to have "full authority and power, as often as they shall think meet and convenient, to enter into the house or houses of all and every apothecary to search, view, and see such apothecary's wares, . . . and all such drugs and stuffs as the said four persons shall there find defective, corrupted, and not meet nor convenient to be ministered in any medicine for the health of man's body, the same four, calling to them the warden of the said mystery of apothecaries, shall cause to be burnt or otherwise destroy the same."

Having made this simple disposition of the adulterated drugs question, this Act of 1540 closed by prescribing that, "forasmuch as the science of Physick doth comprehend, include and contain the knowledge of surgery," duly admitted physicians "might practice and exercise the said science of Physick in all and every his members and parts." This latter clause fairly illustrates the position which surgery occupied, as a profession, at this time. It was more of a vulgar than a learned profession. In 1513 a statute at large exempted the "wardens and fellowship of the craft and mystery of surgeons enfranchised in the city of London, not passing in number twelve persons," from jury and constable service and all matter of office. In 1530 it was found necessary for Parliament to enact that surgery was not a "handicraft," thus exempting surgeons from certain restrictions pertaining to handicraft men. The first statute, however, strictly pertaining to surgeons was passed in 1540, the thirty-second year of Henry VIII. If we may believe the preamble of this Act, there were abiding in London "men of great experience as well in speculation as in practice of the science and faculty of surgery," but unfortunately there were two distinct companies exercising the science, one called the barbers of London and the other the surgeons of London. The barbers' company was incorporated by letters patent of Edward IV. The surgeons' company was unincorporated, and therefore the two companies were made one under the title of "Masters or governors of the mystery and commonalty of barbers and surgeons in London." The new corporation was invested with the autocratic powers which had previously been bestowed on the physicians' company, such as the summary "punishment and correction as well of freemen as of foreigners, for such offences as they or any of them shall commit or do against the good order of Barbery or Surgery." Under such a power as this, offenders against good practice were summarily thrown into the common jail, and at a later date Parliament was obliged to restrict the power of these corporations and correct the abuses which had arisen.

One of the clauses of this statute of 1540 allowed the surgeons to take yearly the bodies of four executed malefactors, "for anatomies," which number was increased to six in the time of Charles II., "provided they be afterward buried." Another clause recited that as persons exercising surgery at the same time exercised "barbery, as washing or shaving and other feats," whereby infection resulted, therefore no one "using barbery or shaving" should "occupy any surgery, letting of blood, or any other thing belonging to surgery, drawing of teeth only excerpt."

It was not until the eighteenth year of George II. that a statute was passed giving a modern recognition of surgery. It repealed the Act of 1540 and disconnected the surgeons and barbers. Henceforth surgery was free from the incubus of "barbery." It is thus seen that legislation relating to physicians was far in advance of that concerning surgeons. An illustration of the enlightened view with which the judges regarded the profession of the physician is found in the decision of one of the first cases arising under the statute of 1541: A man was prosecuted for practising contrary to the provisions of that Act, and the Court decided that "practising physick" involved three things: "First, In judging of the disease and its nature, the constitution of the patient, and many other things. Second, in judging of the fittest and properest remedy for the disease. Third, in directing and ordering the application of the remedy to the disease."

We have presented a brief view of the early English medical and surgical legislation. All of its important features are found to have been the work of the first thirty-five years of the reign of Henry VIII. Henry himself was the last person whose mind was calculated to originate and develop such legislation. It must be ascribed to the activity of a far greater mind—that of Cardinal Wolsey—"one, that by suggestion, ty'd all the kingdom."

Progress of Medical Science.

An Easy Method of Posterior Rhinoscopy.—The importance of visual inspection of the naso-pharynx and posterior nares in all local diseases cannot be questioned. Ordinarily such examinations are attended with various difficulties. Dr. Walsham (*Lancet*, July 28, 1883), describes a simple method of overcoming these difficulties, admitting, however, that a somewhat similar procedure has for years been practised by some American specialists: A piece of soft red rubber tubing, about one-eighth of an inch in diameter, is introduced into one nostril, and pushed very gently along the floor of the nose till it presents just below the soft palate. It is then gently seized with a forceps, drawn out through the mouth, and loosely tied across the upper lip to the end protruding from the nose, the elastic tube being stretched just sufficiently to loop upward and forward the soft palate, and draw it well away from the posterior wall of the pharynx. The looping of the palate on one side is often sufficient; but a better view is obtained by passing a tube through the other nostril and looping up the soft palate of that side in the same way. The posterior nares and naso-pharynx can now be examined with the ordinary laryngoscopic mirror with the greatest facility. One hand only is required to hold and direct the mirror (the stem answering the purpose of a tongue-depressor), the other hand is consequently free to perform any manipulation or operation that may be required. The tubes serve as a good guide, as they can be followed in the mirror winding round the upper surface of the palate, and so into the respective choanæ. The introduction of the tube causes hardly any discomfort or annoyance to the patient. Care, however, should be taken in passing the tube to let it only just present below the soft palate, as otherwise, if it is pushed further, it may impinge upon the lower pharynx, and is then apt to produce a tickling sensation and desire to vomit. When the examination is finished, it is better to withdraw the tube through the mouth rather than through the nose, and when the nasal end is just about to drop into the pharynx to give it a sharp whisk forward. If it is withdrawn through the nose, the mouth end trails along the tongue, causing a tickling of its posterior part. In place of the red rubber tubes, the American surgeons referred to use flat tapes or narrow bandages for tying up the palate. These have necessitated the use of various instruments for passing them, such as the Eustachian catheter, Bellocq's sound, etc. The advantages of the red rubber tubing are that it is soft, non-irritating, and possesses just sufficient resistance to enable it to be passed through the nose by itself, thus dispensing altogether with the use of an instrument, the passage of which, as for instance in plugging the nares, is, as is well known, a source of much discomfort and annoyance to the patient.

Good Remedies out of Fashion.—In an address on this subject, recently delivered by Dr. C. J. Hare, the lecturer made some interesting observations on emetics and bleeding (*British Medical Journal*, July 28, 1883). In former times it was not unusual to commence the treatment of many diseases with the administration of a dose to procure vomiting. And although the remedy might then be given sometimes indiscriminately and according to routine, only those who had seen the effects of emetics, properly and judiciously given, could conceive the beneficial effects they sometimes produced. In the early stage of an attack of croup, it was by no means unusual to give an emetic of tartarized antimony or of ipecacuanha. And it was in accordance with the recorded experience of some of the best authorities and most practical men, and quite consonant with his own experience too, that symptoms which presented the most certain augury of a severe attack were by these means cut short, the hoarse voice resumed its natural character, and the feverish symptoms were in a few hours relieved. He knew quite well that a great fear was entertained by some as to the depressing effects of emetics. But the fear was theoretical, and not practical, and those who had had most experience in the administration of them best knew how groundless the fear was. In diphtheria, too, he had seen the false membranes which were out of the reach of local remedies, and which the patients coughed and coughed in vain, and utterly exhausted themselves to get quit of, readily brought up by the action of vomiting, to the immense relief of the sufferer. "In suffocative bronchitis," the lecturer continued, "the effect of emetics is sometimes magical, and by their administration in such cases not only is immense relief given, but I am certain that lives are saved. You are called to a patient who has been ill a few days, with increasing dyspnœa; she is sitting up in bed (I draw from nature), for to lie down is impossible; she is restless and tossing about; the lips, and indeed the whole face, blue; the eyes watery and staring; the pulse quick and small; the cough constant; the expectoration semi-transparent and tenacious; over every square inch of the chest, front and back, from apex to base, you find abundance of rhonchi; moist, sonorous, and sibilant ones in the upper part of the lungs, and muco-crepitant or mucous râles toward the bases. Ammonia and stimulants, right and good in their way perhaps, in such a case are too slow in their action; the patient is, in fact, more or less slowly, more or less rapidly suffocating. An emetic of twenty-two grains of ipecacuanha in an ounce of water is given; in ten or fifteen minutes the patient vomits and brings up a huge quantity of that tenacious mucus, and the whole aspect of the case is altered; the distressed countenance is relieved; the breathing is at once quieter; and the patient is able, for the first time for the past twenty-four hours, to lie moderately low in bed, and to get some sweet refreshing sleep. The patient is, in fact, rescued from the extremest peril, and in this case, and in many similar ones too, I believe, from otherwise most certain death. Of course, in such cases the emetic is not given for its effect on the stomach, but for its collateral effect in mechanically clearing out the enormous amount of secretion which accumulates in the bronchial tubes, and which the patient is otherwise quite incapable of getting quit of; and thus the half-choking, almost asphyxiated condition is changed for one of comparative comfort, and time is gained for the action of other appropriate remedies. No doubt the secretion may, and often will, accumulate again; and I have not hesitated again in bad cases to repeat the same good remedy; but it is a fact, and a very positive one too, that, quite contrary to what those who have had no experience in the plan suppose, the system rallies instead of being more depressed under the action of the remedy. There is a class of cases in which the right heart is engorged with blood, and in which the only hope of rescuing the patient from death is by bleeding. A man of middle age (I again draw from nature) has considerable chronic bronchitis, with some congestion of the lungs, and, like many other unwise persons, he goes to a southern watering-place instead of remaining in his room and in an uniform temperature. Becoming worse, he determines to return home, and travels on a cold spring day; his dyspnœa is so much worse on the journey, that his friend and the fellow-passengers doubt whether he

will arrive home alive; and when his carriage meets him, it is with the greatest difficulty he is conveyed to his house, and got into his drawing-room. You are at once sent for, the message being that the patient is dying, and when you arrive you find that that is the fact. He is sitting in a chair (to lie down is impossible for him), his face is blue and swollen, his lips purple, the eyes suffused and staring, his heavy gasping breathing you have only too distinctly heard and recognized as you ascended the stairs, and when you see him you find his chest heaving, and each short gasping inspiration followed by a long wheezing and moaning expiration; his lungs are full of moist, sonorous, and mucous and submucous rhonchi, and scarcely a trace of vesicular respiration is to be heard, and he is pulseless. He looks to you beseechingly, and gasps out, in scarcely articulate words, that he is dying. This is but too true. Now, the treatment for such a condition at the present day is 'to pour in stimulants' (though the patient can scarcely swallow). Brandy and water are given, and ammonia, and perhaps ether; then, if the patient live long enough to have them made, mustard poultices are applied to the chest, and to the calves, and to the feet, and the patient is fanned, and the patient dies. Something has been done, but that which true pathology—and, indeed, common sense, unshackled by prejudice, custom, and fashion—would dictate, has been left undone. Appearances have been saved, but not the patient's life. The fact is, that here the danger lay in the right side of the heart being gorged with blood, so that it was impossible for its stretched and distended walls to contract and to propel forward the thick and blackened blood. Relieve that poor oppressed, distended heart, and all may be well. Open one of those veins which are, with every systole of the heart, tending to carry more and more blood to this already distended right ventricle, and all may yet be well with your patient. Sometimes this blood-letting, in extreme cases, is no easy matter; it may be necessary, before you can effectually open the vein, to place the patient's arm in warm water, so as sufficiently to distend the vein; and even when the ligature has been efficiently applied, and the vein well opened, you may have to press and squeeze and rub upward the arm before a drop of the thick and tarry blood will flow. But, when it *does* flow at length freely, what a marvellous change may you see take place! —the breathing becomes quieter, deeper, and less noisy, the haggard face resumes the appearance of tranquillity, the blueness of the skin is replaced by a more natural tint, the pulse becomes more and more distinct, and, in a word, the choked-up heart is set free."

Splenectomy.—Dr. A. Blum has recently written an article upon the subject of excision of the spleen (*Archives Générales de Médecine*). His conclusions, based upon a study of the recorded cases, are that while the operation of splenectomy is practicable and is compatible with complete recovery, it is so often fatal from hemorrhage or shock that it is but rarely indicated. He considers that it is not justifiable in cases of splenic cysts, because they can be cured by other and milder measures; or in cases of hypertrophy, whatever its cause, or in cancer of the organ, on account of the very high mortality. But he points out that in cases of movable spleen, with marked and severe symptoms, the operation is comparatively easy and successful; while in cases of hernia of the spleen following an injury the removal of the herniated portion is so successful that the surgeon is fully warranted in undertaking it.

The Action of Piperidin.—This substance has been experimented with by Fliess. The results of his researches are given as follows by the *Lancet*, July 28, 1883: If a dose of piperidin be subcutaneously injected into a frog, after a short period of unrest the animal remains remarkably quiet and no longer moves when the foot is pinched, and that this is not due to lesion of the muscles or to paralysis of the motor nerves is shown by the vigorous movements that are made if the sciatic nerve be stimulated by an induced current. Paralysis of the sensory nerves must therefore be the cause of the lack of response of the animal to sensory stimuli, and the question arises whether it is the nerve or the centre that is paralyzed. The loss of reflex excitability takes place about ten or twelve minutes after the injection of one milligramme of piperidin, and is so complete that even its contact with the eye fails to elicit any response. Recovery of the sensibility occurs at the expiration of twenty-four hours. It has been rendered probable by Kronecker's and Stirling's experiments that a single shock is insufficient to excite a reflex action, and that at least two are required, which must be separated by a a short interval only. In his experiments with piperidin, however, Fliess found that the time which elapsed between two shocks in order that a reflex movement should be induced was not altered, but only that the shocks must be much stronger. Hence he arrives at the conclusion that it is not the centre which is acted on by the piperidin, but the conducting agent—the nerve. The paralysis of the sensory nerves only occurred in those parts of the body to which the blood impregnated with piperidin was distributed; in any part of it protected from the action of such blood the sensory fibres retained their function. Further experiments demonstrated that the part of the sensory nerves on which piperidin acts is their peripheric termination. All the experiments proved that neither the muscles nor the motor nerves were in any way affected. Other results observed after the subcutaneous injection of one milligramme of piperidin were that the frequency of respiration fell to one-half the normal amount—that is, from 60 to 36 and 30 per minute. Large doses led to the Stokes' phenomenon, respiration being interrupted for two to four minutes, after which the frog made from three to four deep respirations. In regard to the cardiac beats, their number similarly fell to about two-thirds of the normal, from 54 to 34 per minute. Fliess further made some observations on the action of piperidin on warm-blooded animals, but did not find that its effects, in the rabbit at least, were nearly so well marked, even though fatal doses were administered, and this he attributes in part to the circumstance that piperidin oxidizes with extraordinary rapidity in the body. The frequency of respiration was considerably reduced, the number falling from 200 to 48 per minute, while the cardiac beats rose from 220 to 340 per minute, so that it would appear that the vagal centre was paralyzed. The pupil became widely dilated, and the heart, when death occurred, was arrested in systole.

Anterior Luxation of the Phalanges.—In a paper presented to the Société de Médecine of Paris, Dr. Thorens takes issue with Boyer, who has denied the possibility of forward dislocation of the phalanges (*L'Union Médicale*, July 22, 1883). He cites several cases recorded by others and one seen by himself. He concludes therefore: 1. That forward luxation of the phalanges is possible. 2. It can occur only after rupture of the anterior and of one lateral ligament. This partial dislocation is accompanied by a certain degree of torsion. 3. Complete anterior dislocation can occur only after the rupture of the anterior and both lateral ligaments.

Prevention of Ophthalmia in the New-Born.—Dr. Credé returns again to the subject of ophthalmia neonatorum, treated by him in former publications, and urges his colleagues for the third time to adopt his method for the prevention of this disease and the blindness so often resulting therefrom. He proves the value of his treatment in a few words. It is shown by statistics that, whereas formerly a large proportion (fifteen per cent.) of new-born children suffered from this affection, often so serious in its consequences, the number speedily diminished after the introduction of his method, until

finally, for a number of years, no cases at all were seen. Regarding the etiology of the affection he states: 1. That ophthalmia neonatorum is a disease caused by a specific virus identical with that of gonorrhœa. 2. The poison, contained chiefly in the secretion of granular vaginitis, finds access to the conjunctiva during the period of expulsion of the child. 3. Normal vaginal secretion never causes the specific conjunctivitis. 4. Protracted delivery, early rupture of the membranes, and the large size of the child, increase the danger of infection. The author reviews the methods of prophylaxis formerly practised. These may be classed under two heads, the one seeking to obtain the desired result by disinfectant injections into the vagina, the other applying remedies to the conjunctiva of the infant. The first way was barren of results, and the best effects of the second are only obtained, the author says, by his procedure. This consists in wiping the eyes with a clean, wet rag, and then introducing, by means of a glass rod, one drop of a two per cent. solution of nitrate of silver into each eye. He has never seen any unfavorable reaction follow this little operation. This method has been practised in all the lying-in institutions and foundling asylums of Austria since the beginning of the year, and Credé hopes to see it become general everywhere, both in hospital and private practice.—*Centralblatt für Gynäkologie*, July 28, 1883.

THE ACTION OF ALKALIES ON BILE.—Some researches have been made recently by Lewaschew and Klikowitsch on the subject of the influence of alkaline agencies on the composition of the bile. The experiments were made on dogs with permanent fistulæ leading to the gall-bladder. No canula was used, however. For twenty-four hours previous to the beginning of the experiment neither food nor drink was administered. It was found that artificial and natural mineral waters had a similar action on the secretion of bile. For some time after the administration of the alkaline waters the quantity of bile flowing from the fistula was diminished. This effect was probably due to the increased flow of bile into the intestines. After this initial period the flow from the gall-bladder became more than the normal. The normal amount had been previously measured. Artificial waters exercised the same influence on the quality of the bile as the natural waters; but different results were obtained with waters of different degrees of concentration. Thus, carbonate of sodium had a more rapid, powerful, and lasting influence on the composition of the bile than sulphate of sodium. Solutions of weak strength were more powerful than those of higher concentration. Hence, those mineral waters whose principal constituent was carbonate of sodium had the greatest influence on the composition of the bile, especially when the carbonate was not present in a high degree of concentration. The higher the temperature of the fluids ingested, the earlier and more marked were the effects.—*Centralblatt für Klin. Med.*

THE HYPODERMIC INJECTION OF BLOOD.—In the *Archivio per le Scienze Mediche*, vol. vii., 1883, Dr. Carlo Bareggi presents a *résumé* of a prize essay written by him and published in Milan in 1882, upon the subject of the hypodermic injection of blood. His conclusions were derived from physiological experiments upon animals and clinical investigations in disease. Various methods were practised, and blood from different sources was used, but the best results were obtained with defibrinated blood taken from the same species as that of the receiver. In the human subject a donor was selected who was perfectly healthy and free from any hereditary diathesis and, if possible, younger and of the same sex as the receiver. If more than six ounces of blood was desired it was obtained by venesection, but when a smaller amount than three ounces was wanted it was taken by means of a wet cup in the palm of the hand. In the earliest experiments he employed an ordinary Pravaz syringe, but later, in order to avoid the great number of punctures and the increased danger therefrom, he made use of an instrument similar to that employed by anatomists for injecting the minute blood-vessels and lymphatics.

The author sums up the results obtained, as follows: 1. Hypodermic injections of blood in amounts of one gram are absolutely innocuous. When greater quantities are used, the injections are relatively harmless according to the regions of the body in which they are practised and the method employed. The parts of the body which best tolerate the injections are indicated in the original memoir, where also the best method of operating is described in detail. 2. In man, hypodermic injections of blood are always followed by a slight febrile movement, varying in duration from a few hours to, at the most, two days. 3. The red globules of homogeneous blood, defibrinated or not, injected into the subcutaneous connective tissue, are absorbed, in part at least, unaltered, and pass into the general circulation. Their course is from the lymphatic spaces in the connective tissue into the lymphatic vessels leading from the part, through the glands met with on the way (unless these are in an advanced stage of fibro-adipose degeneration or in some other way profoundly altered), and thence into the receptaculum chyli and thoracic duct. They were found in the principal lymphatic trunks of the part twenty minutes after the injection was practised, and even after three days, numbers of them in a good state of preservation were encountered in the thoracic duct. The greatest number was met with twelve hours after the injection, but even after fifteen days, quantities of red globules, but little changed, were seen passing from the cellular tissue into the circulation. Absorption of the mass of injected blood proceeded rather slowly in individuals in whom the circulation was sluggish, especially in those in whom there was considerable subcutaneous adipose tissue, but more rapidly under normal conditions of the heart's action and in persons in good general condition. The red globules were unchanged after remaining many days in the cellular tissue, except in cases in which there was considerable febrile reaction. 4. Hypodermic injections of blood are capable not only of arresting the progressive deterioration in the quality of the circulating fluid, caused by insufficient nourishment or repeated losses, but also of increasing, in spite of such persistent influences, the corpuscular richness of the blood. 5. This increase in the relative proportion of red globules is equal, or very little inferior, to that obtained by the administration of ferruginous tonics in cases in which these remedies are tolerated. The improvement shows itself very soon after the first injection, and persists long after the treatment has been discontinued. Together with increased richness of blood comes a marked improvement in the general nutrition and nervo-muscular force. 6. To obtain such effects, it is necessary to repeat the injections several times at intervals of five to fifteen days, and to inject each time a considerable quantity of blood. In one case Dr. Bareggi made four injections of 100, 100, 120, and 130 grams (3 to 4 ounces) respectively in twenty-nine days. The relative proportion of hæmoglobine was more than doubled. In a second case four injections of 200, 300, 150, and 240 grams (4½ to 9½ ounces) respectively were practised in the course of twenty-two days, and the proportion of hæmoglobine was nearly doubled. 7. If these results are compared with those obtained by intraperitoneal transfusion, it will be seen that they not only equal but surpass them, and that without any danger to the patient, and by a method at once easy and inexpensive. "In the hypodermic injection of blood, therefore, we have a new and most valuable therapeutic resource. It is especially adapted to the treatment of those cases of slowly progressive anæmia in which the digestive canal is extremely irritable and unfit for the reception, retention, digestion, and transmission to the blood of nutritive materials and medicaments."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 1, 1883.

THE PILGRIMAGE TO MECCA AND THE CHOLERA IN THE EAST.

AT the present time, when the danger of cholera is so imminent, a little *brochure* with the above title by Dr. Stékonlis, reprinted in Constantinople from the *Gazette Medicale de l'Orient*, is of peculiar interest. The work is divided into six chapters, treating respectively of the holy city of Islam, the pilgrimage, the health of the pilgrims and of the city of Mecca, cholera epidemics in Mecca, the origin of these epidemics and the prophylactic measures taken against their spread. Mecca possesses a very changeable climate, and is swept with high winds and deluged with frequent storms of rain. The city is dirty and scantily supplied with water—from cisterns and from brackish springs. The water of the holy well in the temple of El Haram is especially foul, muddy in appearance and saltish to the taste, and contains, according to an analysis of Frankland, a large amount of organic matter. The number of pilgrims is variously estimated at from fifty thousand to one hundred thousand annually. The number is, however, gradually falling off, in spite of the command of the Koran that every one of the faithful must visit the holy city at least once during his lifetime. This is due in a measure to the interpretation put upon the injunction by the sect of the Chafie (the Turks), who say that it is binding only upon those who have the means and the health necessary to the journey. The Dutch Government allows none of its Mohammedan subjects to start on the pilgrimage unless he can prove that he possesses means sufficient to defray all the expenses of travel and food. The most wretched and destitute of all the pilgrims, says Dr. Stékonlis, are those coming from British India. The cost of food and even of water in Mecca is very great, and those who come unprovided with money to buy these necessaries suffer severely, and fall ready victims to disease. Since 1865 the condition of the pilgrims has been greatly ameliorated by the exertions of the international sanitary commission at Constantinople. It is now forbidden to slaughter animals for food except in certain designated localities outside of the city; inspectors are appointed whose duty it is to see that the pilgrims observe some of the ordinary rules of cleanliness in their lodging-places, and numbers of deep privy vaults have been dug throughout the city. There is a pilgrims' hospital with sixty beds.

From 1813 to 1881 there were sixteen epidemics of cholera in the holy city, all of which, with but one exception (that of 1846), occurred at the time of the annual pilgrimage. One of the greatest outbreaks of the disease was in 1881, when it lasted from the middle of September to the end of the year. Some 5,000 of the 100,000 pilgrims of that year perished. The disease was carried from Mecca in all directions by those returning to their homes, but was kept out of Egypt and Turkey by the exertions of the health commission. A double quarantine was established for the returning pilgrims. The first, of fifteen days' duration, was at El Medji, on the Egyptian boundary, 375 miles from Suez; and the second, for forty-eight hours, at Jebel-el-Tor, 125 miles from Suez. Another quarantine, of ten days' length, was established at Beyrouth, and all the returning pilgrims were subjected to a second medical inspection before passing the Dardanelles. That the cholera in Mecca is carried thither by the Indian pilgrims there can be no reasonable doubt. The author states that each of the great epidemics in that city was directly dependent upon exacerbations of the cholera in India. In 1882 a quarantine was established on the Island of Camaran, at the mouth of the Red Sea, for all pilgrims coming from India. This island lies 150 miles north from Cape Babel-Mandeb, is eleven miles in length and three and a half miles wide, and is plentifully supplied with pure water. All ships passing through the Straits of Babel-Mandeb were compelled to go to the island of Camaran. There the passengers were landed and examined by the medical officers. If all were healthy, they were allowed to proceed after five days; but ships from a place where cholera existed, or those having cholera aboard, were detained from ten to fifteen days. The southern part of the island was reserved for the healthy, the northern part for the sick. From July 27th to October 20th, 5,518 pilgrims passed through this quarantine to Mecca. In spite of these precautions, however, the disease appeared in the latter city. The explanation of this failure the author finds in the fact that the English protested against the quarantine, and that English ships bearing pilgrims would not submit to the detention at Camaran. The English authorities kept the existence of cholera at Aden secret for thirty-five days, so that Mecca became infected from ships carrying clean bills of health. Dr. Stékonlis states that in 1882 the Egyptian pilgrims, for the first time, returned by water, having always before gone home by caravan through the desert. To this fact possibly is due the present epidemic of cholera in that country. The partial success already achieved by imperfect quarantine of pilgrims going to and returning from Mecca, gives occasion to the hope that greater perfection in the methods now inaugurated, may succeed in removing this source of peril to Europe and the rest of the civilized world. The author seems to think that the only hindrance to a perfect quarantine and the prevention of cholera in Mecca is the refusal of the English to submit to the vexatious, but necessary, delays thereby caused.

THE TIME AND MANNER OF WEANING.

THE Commission permanente de l'Hygiène de l'Enfance of the Paris Academy of Medicine offered a prize in 1880 for the best essay on the subject of weaning. None of the productions offered at that time was deemed worthy

of a prize, so the committee determined to invite further competition on the same subject for 1882. Ten memoirs were sent in in answer to this second appeal, six of which were regarded as worthy of note, and of these, two were especially commended. The report of the committee was made to the Academy at its meeting on June 26, 1883. (This learned Society, it will be remembered, devotes its entire energies to the advancement of science, and eschews politics. Hence its regular meetings are not interrupted from early spring to autumn.) After a short analysis of each of the essays submitted, the report closed with a concise summary of the most practical suggestions contained in the approved memoirs. These conclusions were briefly as follows: Generally speaking, the child should be fed at the breast during at least the first year of life. The term weaning should be understood as indicating the time at which the child ceases to be suckled and begins to be fed with other food than breast-milk. The weaning of an infant fed at the breast should be a progressive process, for too rapid weaning is often attended with fatal consequences. Gradual weaning is best accomplished by supplementing the mother's milk with cow's milk. This should be given in a bottle, as the effort of sucking excites glandular secretion, and, if possible, it should be withheld until the third or fourth month. After the sixth or seventh month a little farina, oatmeal, starch, or bread may be added to the animal milk to make a thin pap. At the end of a year eggs and butter may be used and bouillon may be substituted for milk in preparing the gruel. At the end of eighteen months or two years vegetables and fruits may be allowed, but meat and wine only after this time. The meals should be given at regular hours, twice a day to begin with, and the intervals between the times of nursing should be increased at first during the night. When about to complete the process of weaning, it is important to choose: 1, a time at which the infant is in perfect health; 2, the interval of calm which separates two dental crises, as after the cutting of the third group or the first molar teeth, or after that of the fourth group or the canines; 3, a season of medium temperature, as spring or fall, so as to avoid equally the great heats of summer and severe cold of winter. All the writers commented upon the lamentable ignorance of this subject displayed by the mothers of France (and they might have added, of the world at large), and suggested that mothers and nurses should be instructed in the elementary duties of their station by means either of printed tracts or public lectures. A valuable suggestion, no doubt, but one which it is to be feared will prove very difficult of practical application.

THE QUESTION OF ABUSE.

Dr. Squibb, in the *Ephemeris*, refers to the "abusive comments" made by some medical journals upon the action of the American Medical Association at its last meeting. It is strange that those gentlemen who have been so active in circulating scandalous charges against New York physicians, should now complain themselves of being "abused." No one can deny that a very large proportion of the profession throughout the country, including men of the highest character, and even the President of the Association himself, think that a change is needed in the Code. When a few men at Cleveland, therefore, endeavor to strangle all attempts at securing reform and harmony, they lay themselves open to severe criticism. The Cleveland meeting was indeed harmonious, but its effect has been to increase the discord and bad feeling in the profession. For this reason we, in common with many other medical journals, have criticised its action as most unwise and short-sighted.

The charge which most journals have now fallen back upon and content themselves with reiterating, is that the New York Society is in rebellion. It seems impossible for some of our contemporaries to understand, in this connection, one of the simplest principles in law and right, namely: that a chartered and legally constituted body cannot in any sense "rebel" against the regulations of an unchartered body without legal status, with which also the former is only in voluntary relation.

THE MICROCOCCI OF DYSENTERY.

We admire the courageous diligence of Dr. Prior, of Bonn, who has been studying the micro-organisms in dysenteric passages. Dr. Prior, by special arrangements with a docile patient, caught the dysenteric stools in disinfected bowls, and within five minutes had preparations under the microscope. In that time, he very truly says, few bacteria could get in from outside or could develop from within. He used for his examinations only the purely dysenteric passage, without admixture of fecal matter.

He found in fresh unstained specimens vast numbers of the round cocci. They were in active movement, and were arranged in chains or in pairs, and singly.

They were strikingly like, in size and shape, to the cocci of pneumonia as described by Finkler; of cerebro-spinal meningitis as described by Leyden, and of erysipelas. They were, however, a little smaller and more delicate than those of pneumonia. They possessed active movement.

He also found a few very fine bacilli. The shreds of mucous membrane which were found in the stools were thoroughly washed and examined. Here there were also countless micrococci, but no rods.

In order to compare these appearances with those of health or of other diseases, Prior examined a number of the stools from healthy men and from patients suffering with tuberculous diarrhœa, typhoid fever, and simple intestinal catarrh. He found micrococci and bacilli here also, but the former in extremely small numbers compared with those in dysenteric stools. On the other hand, the bacilli were very much more numerous.

Experiments with staining fluids were made in order to see whether the cocci could be differentiated in this way. They colored beautifully with gentian violet and Bismarck brown, but had no special stain and could not be doubly stained.

Examinations were made of the diseased intestine, fresh specimens, and those preserved in alcohol, and Müller's fluid being used. The micrococci were found not only in the tissue-juice, but in the tissue itself.

The blood was examined a number of times, but nothing abnormal discovered.

The similarity between the micrococci of pneumonia,

cerebro-spinal meningitis, erysipelas, and dysentery is, to Dr. Prior, a very suggestive fact. To us it appears that the attempt to find a pathological unity or consanguinity between these diseases is rather strained.

Prior does not pretend to say that the organisms he describes are the cause of dysentery. He intends, however, to make some gelatin-cultivations of them, and then inoculate the younger generations. He expects to be able to show that dysentery will be produced.

NOT ENOUGH MEDICAL COLLEGES.

Our brilliant, but infrequent (being quarterly), contemporary, the *Fort Wayne Journal of the Medical Sciences*, reasserts its view that there are not too many medical colleges in the country. It does not now, however, go quite so far as to say that we need more. Following its able editorial upon the present beatific state of medical education, especially in small western cities, is this notice:

"The medical college of Fort Wayne was closed out, a few days ago, by the constable selling all of the furniture and illustrations in the entire concern to satisfy a judgment against the institution."

We are pained to observe that our contemporary seems rather pleased than otherwise at the collapse of this institution, although it leaves the country one precious college the less.

The history of medical institutions at Fort Wayne is only a repetition of what has occurred over and over again in other places. Medical men, not content with achieving success by the quiet method of ordinary practice, desire to be professors; and thereupon they organize a school. The institution cannot take in all the ambitious doctors in the town; therefore, discontent and jealousy ensue. A rival college is organized, good feeling is disturbed, bitterness and quarrelling arise, and the harmony of the profession broken.

Now, is all this necessary for the sake of crudely educating a few medical students? We think not, although it grieves us, in saying so, to controvert our excellent and too infrequent contemporary of Fort Wayne.

The Presbyterian Hospital, New York.—Arrangements are now being made for increasing the capacity of this hospital and thereby extending its usefulness. The governors are contemplating the erection of a new pavilion, and also the appropriation of some of the spare room in the executive building for extra beds. A new passenger elevator has been erected in the main building, and a new ambulance, which is claimed to be the best made and most complete one in the city, has been recently presented to the institution. Since the establishment of the ambulance service in this hospital the number of acute surgical cases has increased to such an extent that the wards are constantly crowded to their utmost capacity. The attending staff proposes to utilize this material for free clinical instruction to students and practitioners during the coming fall and winter.

Typhoid Fever in Country Resorts.—It is reported that typhoid fever has shown itself in several country resorts.

News of the Week.

The Vacation of Physicians and the Health of New York.—The health of New York is very good, considering the season. This may be probably due to the fact that a large number of invalids have been sent to the country to recruit. At least the larger majority of fashionable physicians do not consider it worth while to remain in town for purely business purposes. Those only who are sick need the physician, and the physician needs only the sick. Both being temporarily separated are now enjoying a rest. With the coming fall, both will doubtless return to work with renewed vigor. The latter is often needed more by the doctor than the patient in these days of active competition in practice.

The New President of the Health Board of this City is giving great satisfaction by close attention to business and energetic endeavors to initiate practical reforms in his department. He is constantly in his office and gives personal attention to details.

The Tri-State Medical Society will meet in English's Hall, at Indianapolis, on September 18, 19, and 20, 1883, commencing at 9 A.M. Excursion rates have been secured on the following railroads: C., C., C. & I.; Cin., Indianapolis, St. Louis & Chicago; Cin., Wabash & Mich., Indianapolis & St. Louis; I., B. & W.; Wabash, St. Louis & Pacific; Indianapolis & Vincennes; J. M. & I.; Pitts., Cin. & St. Louis; Vandalia, Evansville & Terre Haute; Ft. Wayne, Cin. & Louisville. The New Denison, Grand, Bates, and Brunswick have reduced their rates for the occasion, and everything promises a very large attendance. Many papers of great interest will be presented. For further particulars address Thos. B. Harvey, M.D., Indianapolis, Chairman of Committee of Arrangements. Dr. Wm. Porter, of St. Louis, is President, and Dr. G. W. Burton, of Mitchell, Ind., Secretary.

Getting the Best of a Quack.—A quack with many aliases but generally known as the Indian Medicine Man, was recently prosecuted by the Illinois State Board for violating the Medical Practice Act of that State. The quack was accustomed to give public exhibitions of his quackery at different towns in the State. On one such occasion at Decatur complaint was made against him, a license which he had fraudulently obtained was revoked, and he was placed under bonds of $500 for each violation of the law in the shape of an exhibition. He gave but two of the latter and then decamped.

The United States Medical College—Decision by the Supreme Court.—We are in receipt of the decision handed down by Judge John R. Brady of the Supreme Court, in relation to the case of the so-called United States Medical College, represented by Dr. Robert A. Gunn and others. The charge against this Institution, it will be remembered, was that the defendants were, under the act of June, 1882, illegally acting as a corporation without authority, and were exercising privileges and franchises not granted to them by law. It had previously been determined that the act of 1848, for the formation of charitable, literary, scientific, and benevolent societies, under which the defendants set up their cor-

poration, did not provide for or authorize the incorporation of medical colleges to give instruction, issue diplomas, etc.; and that the law of 1882 did not legalize the incorporation. In this view Judge Brady also concurred. In rendering this decision it was held that the law of 1882 related to scientific and literary colleges and universities, and not to medical colleges, since such language was not employed in the wording of the Legislative act, it being presumed that that body was advised of medical colleges, etc., in the premises. Judge Brady's concluding remarks are worthy of note, viz.: "The courts of this State cannot be too scrupulous in examining the asserted right of any college to graduate matriculates with the degree of doctor of medicine, and to grant them diplomas conferring such degree. The high and responsible duties of a doctor of medicine, relating as they do to suffering humanity, and life itself, and requiring for their proper discharge a high order of culture, experience, and capacity, there should not be the slightest doubt about the due and legal incorporation of every college or society assuming the power to confer upon him the necessary degree, and thus enable him to practise as a physician and surgeon."

Preparing for Cholera in Paris.—At a meeting of the Municipal Council of Paris, on July 27th, a grant of four hundred and eighty thousand francs was voted to provide for the construction of a temporary hospital for cholera patients in the event of an outbreak of that disease. The buildings are to be erected on one of the bastions of the line of fortifications, and will provide accommodations for two hundred patients. Should the cholera not put in an appearance the hospital may be used for the reception of small-pox patients, or of those suffering from other contagious diseases.

Professor William Osler, of McGill Medical College, Montreal, has been elected a Fellow of the Royal College of Physicians of London, England. Dr. Osler has held the chair of physiology in the above college for many years, and has done much good work in original investigation. He is at present general secretary of the Canada Medical Association. He is a young man yet, and is to be congratulated on the honor of attaining to the F.R.C.P. solely as the result of his scientific labors.

Changes in Medical College Professorships.—The following are some of the new appointments to professorial chairs, which we find mentioned in our exchanges: Professor Parvin has been tendered the Chair of Obstetrics in the Jefferson Medical College, recently made vacant by the resignation of Professor Wallace. The vacancy in the Faculty of the University of Louisville, made by Dr. Parvin's resignation, has been filled by the appointment of Dr. John A. Octerlony. Dr. Roswell Park, of Chicago, editor of the *Medical Review*, and connected with the Chicago Medical College, has recently been called to the Chair of Surgery in the Medical Department of the University of Buffalo, N. Y.

The Code in St. Louis, and How a Recent Official Statement is Contradicted.—At the meeting of the American Medical Association, in Cleveland, Dr. S. Pollak, member of the St. Louis Medical Society, offered a resolution to the effect that a committee be appointed for the purpose of revising the code of ethics, and that this committee "be authorized to prepare a code of ethics which in their view will meet the wishes of the profession, and submit the same to the meeting of 1884." At a subsequent meeting of the St. Louis Medical Society a resolution was adopted repudiating the action of Dr. Pollak, and expressing the fealty of the Society "to the existing code of ethics as a time-honored and most suitable fundamental law of the profession," and deprecating "any action calculated to reflect upon its loyalty to those principles which have heretofore secured immunity to the machinations of schismatics within or enemies without." Thereupon Dr. Pollak published, in the *St. Louis Medical and Surgical Journal*, a certified copy of an extract from the minutes of the meeting of the St. Louis Medical Society of June 2, 1883. At this meeting it was resolved unanimously that the delegates of the Society to the meeting of the American Medical Association "be requested to move for the appointment of a committee of one member from each State, for the purpose of taking into consideration the propriety and advisability of a revision of the code." The delegates were further instructed to invite the delegates from the State of Missouri to join with them in presenting this resolution to the American Medical Association. Dr. Pollak appears to have had the best of the argument thus far.

Meeting of the Virginia State Medical Society.—The fourteenth annual meeting of the Medical Society of Virginia will be held at the Rockbridge Alum Springs, Va., commencing on Tuesday, September 4, 1883. It will be an important meeting, as the Constitution and By-Laws of the Society, and resolutions for the government of the organization generally, will be considered. The Springs Company offers free hotel accommodations to the delegates, and the railroads are selling tickets at greatly reduced rates to those desiring to attend the meeting. Several papers of presumable scientific value are promised by gentlemen in and out of the State.

Gaillard's Medical Monthly.—Our esteemed contemporary, *Gaillard's Medical Journal*, has returned to its old form as a monthly, after appearing weekly for eighteen months. The reasons for this change are stated to be the wishes of its subscribers, as well as the fact that there is now no monthly medical journal published in this city, while of weeklies there are several.

The Progress of the Yellow Fever.—During the past week there has been but little increase of the scourge at the Pensacola Navy Yard, and hopes are entertained that the disease has been arrested by the sanitary precautions which have been inaugurated by those in charge, only four new cases (the wife and daughtar of Dr. Owen, Paymaster Brown, and Lieutenant Whipple) having developed since our last report, and two deaths, that of Assistant Surgeon Owen, U. S. N. and his wife. The villages of Woolsey and Warrenton, located upon the reservation, and populated by the lower classes, have had several cases of yellow fever and one death. At the request of Lieutenant Commander Welch, of the Navy Yard, who feared an epidemic in these villages, Surgeon General Hamilton authorized the employment of five sanitary policemen to make a house-to-house inspection, for the purpose of placing them in a good sanitary condition, and discovering any cases of yellow

fever that might be secreted by the inhabitants. He also authorized the employment of an expert physician to take care of such sick poor who might be afflicted with the disease, in case an epidemic occurred, and were too sick to be transferred to the quarantine hospital, the intentions being to remove all sick as soon as possible from among the well. On August 22d, quite an excitement was created in the city of Pensacola, by the officially reported occurrence of two cases of yellow fever on Palafox Wharf, and many of the citizens took flight. Acting Assistant Surgeon White telegraphed the fact to the Surgeon General Marine Hospital Service, who directed that the cases be immediately removed to the hospital on Santa Rosa Island, and to disinfect the premises, destroy the bedding and clothing of the men. On the following day one of the men who were removed to the quarantine hospital died; an autopsy was held by Surgeon Murray and Assistant Surgeon Leonard, who pronounced the disease from which he died to have been "pernicious swamp fever," and that the other one, who was still living, was suffering from the same disease and not from yellow fever. This diagnosis would seem to be borne out by the facts subsequently learned regarding these cases; it appears upon investigation that the two cases of supposed yellow fever were deserting sailors from the bark Dagmar, from Limerick, who arrived at Reed's sailors' boarding-house, on Palafox Wharf, on August 17th, after three weeks spent in the country, hiding in the swamps and awaiting the departure of their vessel. The Dagmar sailed from a healthy port, brought a clean bill of health, made a long voyage, and was not detained at quarantine, as she was in a good sanitary condition, and there was no occasion for detention. The vessel cleared for Dordrecht, on August 17th, the day these deserting sailors put in an appearance at Pensacola. The house-to-house inspection at Pensacola has been completed, and the city is now considered to be perfectly healthy and free from yellow fever. Hospital tents, disinfectants, experienced medical men, are on the ground, in case yellow fever should appear. Reports from Vera Cruz, Mexico, continue to come in, showing that the disease is still very fatal among the shipping. Sanitary Inspector Mainegra telegraphed on August 24th, that the steamers City of Merida and Discoverer cleared from that port on August 23d, bound for New York. Sanitary Inspector Burgess, in his abstract of bills of health ending August 18th, reports the steamers Alabama for Key West, Saratoga for New York, Cristobal Colon for New York, Ellie Knight for Key West, City of Alexandria for New York, schooner Damietta for Key West, and bark Maria for New York, having sailed during that week. He also reports forty fatal cases in Havana during that period.

THE JOHNS HOPKINS HOSPITAL.—It is said that the medical department of the Johns Hopkins University, of Baltimore, will probably be opened about October 1st. Two of the university professors, Dr. Remsen and Dr. Martin, have been assigned, respectively, to the chairs of chemistry and physiology.

THE ANNUAL REPORT OF THE NATIONAL BOARD OF HEALTH, for 1881, has been delayed unavoidably, but made its appearance this week.

SURGEON BURGESS telegraphs that the mate of the Spanish bark Suiciro, which sailed for New York on the 23d inst., was put ashore at Havana, suffering from yellow fever. Forty deaths from yellow fever occurred at Havana last week.

A DESPATCH from Colon (Aspinwall) states that there is no yellow fever at that place this year, and that the port is in a good sanitary condition.

ASSISTANT SURGEON GUITERAS, U. S. N., has reported for duty at the Pensacola Navy Yard, and has just submitted his report of inspection of the port of Vera Cruz, Mexico, to the Surgeon-General. We hope to give some items of interest from it next week.

THE ANNUAL REPORT OF THE SURGEON-GENERAL OF THE NAVY, for 1881, has just come from the hands of the Government printer. A notice of its contents will appear soon.

SPECIAL SURGICAL APPLIANCES TO THOSE DISABLED IN THE MILITARY AND NAVAL SERVICE.—Congress having appropriated a small sum for furnishing special surgical appliances to those disabled in the military or naval service, Surgeon-General C. H. Crane, U. S. A., is desirous of obtaining authentic information regarding all existing cases of severe and unusual injuries. As no money commutation is authorized, only such cases need be presented as offer a fair prospect of being relieved by surgical or mechanical appliances. Artificial limbs and apparatus for disabled limbs being otherwise provided for, by law, the injuries here in view are almost exclusively those affecting the head, face, or trunk. As trusses are furnished under special legislation, hernia, when not complicated with other injuries, is not to be understood as covered by this appropriation for *special* appliances. As the appropriation is small, it is proper that it be expended only on the most meritorious cases. It is therefore not intended to furnish appliances which are ordinarily within the means of the individual, nor those that are of a character so perishable that it would be difficult to keep up the supply. Regard is to be had chiefly to the severity of the injury, and the ability of the sufferer, unassisted, to procure relief.

THE STATE MEDICAL SOCIETY OF WISCONSIN will hold an adjourned session at the Court House in the city of Milwaukee, commencing on Tuesday, September 4, 1883, at 8 P.M.

DEATH FROM CHLOROFORM IN OLEAN, N. Y.—A colored man, aged thirty-two years, died suddenly in Olean, N. Y., while under chloroform, which was being administered to him for amputation of the toes. From the evidence at the coroner's jury it appears that every care was used to guard against a fatal result. But a very small quantity of the drug was used. Death was evidently caused by heart failure.

ADVERTISING SURGICAL OPERATIONS.—We are receiving from day to day slips from newspapers sent us by subscribers detailing the wonderful exploits of surgeons in different parts of the country. They form very amusing reading, and show that the ignorance of the lay press regarding the importance and rarity of such operations is only equalled by the shameless audacity of the advertisers.

Reviews and Notices.

INQUIRIES INTO THE HUMAN FACULTY AND ITS DEVELOPMENT. By FRANCIS GALTON, F.R.S., Author of "Hereditary Genius." 8vo, pp. 380. New York: Macmillan & Co. 1883.

SUCH as have read the author's work on "Hereditary Genius" will be prepared to appreciate in some degree the scope of the present one. The title itself is suggestive of a wide range of study, and considering the painstaking endeavors of the author, it is a very appropriate one. The inquiries are much beyond the range of similar ones on the nature and conditions of man's mental relations, and show a tendency to dive far below the ordinary level of scientific investigation or metaphysical study. It opens to the student of man a field many parts of which have heretofore been but little explored. Curious and instructive facts are brought out, which may serve as valuable data for future theories of mind-working, and for the proper appreciation of the influences of the development of the higher faculties upon the advancement of the race.

The work is made up of a number of papers scattered in various publications, and although by condensation and interpolation the subject-matter has been worked into a consistent whole, traces of its fragmentary origin still remain. This gives it more of a suggestive than encyclopædic character, and excuses the omission of much of that statistical detail of facts which would otherwise appear to be necessary. Although the reader is oftentimes made to feel that in many instances only the corner of the curtain is lifted between what is known and what is possible to be known, he is constantly surprised to find how broad the border-line is, and how conscientiously and thoughtfully it has been explored by the writer.

In all his studies the author has taken a wide grasp. He deals with the manifestations of human intellect and character on a large scale and in their relations to the universe. Consequently he is given to grouping his facts from many and different sources, and basing his conclusions upon ample statistical demonstrations. Take, for instance, the subject of composite portraiture, so intensely interesting to every student of human constitution and human character. Here he proves that there are general characters belonging to the same type of face which can be consistently combined in a single portrait. Members of families show this correspondence in a striking degree, and while particular features may differ there is generally present what is called a family resemblance—a something which places the individual in his family group. The principle of composite portraiture eliminates slight difference by bringing out the stronger features, and hence a consistent picture of the family type. The manner in which this is done is interesting and suggestive, especially to a medical man given to the study of the faces of disease, the evidences of constitutional power, and the appreciation of racial peculiarities in their broadest sense. Photographs of each individual are taken exactly the same size and exactly full-face. These photographs are superimposed in book-form so that the different features exactly correspond with each other. The book of portraits is then fixed and focussed, and by turning the leaves with regularity and rapidity a combination of these portraits is made upon one plate, each component portrait helping to make a single well-defined composite picture. The author's remarkable success in this line is evinced not only in the composite portraiture of family groups, but of other types in individuals with no consanguineous ties. For instance, there are composite portraits of six and nine cases of tubercular disease, respectively, composite portraits of one hundred and fifty cases, respectively, of the so-called healthy type, and numerous other instances. According to our author there appears to be no actual limit to the combinations which can be made under the circumstances. This certainly opens up a wide field for the study of disease, not only in its bearings upon the face, but upon other parts of the body. What might not be gained by accurate photographic representations of deformities and their composite portraiture in settling upon some absolute standard for comparison. Indeed, the wide application of this method would necessarily suggest itself to the medical man intent upon studying disease and its various manifestations on a comprehensive scale.

Carrying out the same idea the author attempts to apply it to the study of man in all those leading mental and bodily faculties which make him a factor in the great scheme of human evolution. Hence we find our author discussing the propriety of anthropometric inquiries in order to determine their eugenic relations to the human family; in fact, advocating all such measures as may tend by methods more or less mathematical to measure the amount of energy, force, and vitality in large numbers of men, and thereby establish standard types. As preliminary to these ends he studies the various faculties of energy, sensitivity, character, and mental imagery. Some very curious and suggestive facts are brought out in these studies which it would hardly be necessary to detail here. It is sufficient to say, however, that they are capable of being summarized into general principles of great value and extended application. The number of exceedingly interesting data which the author presents regarding mental imagery in reference to number, forms, color, perceptions, and word associations deserve a passing reference. By large correspondence and extended inquiry he proves that a certain class of individuals possess the power of recalling persons and scenes before their mind's eye which is truly remarkable. Not a few can bring up an image in imagination in all its perfections of size, shape, and solidarity. This is a faculty possessed by inventors, artists, and others, and, like many similar mental peculiarities, is strongly hereditary. Again, many persons have the same visionary associations as regards numbers. The latter to some appear before the mind's eye in tabulated arrangement, to others in wavy lines, each wave occupied by a particular number. With colors the same curious arrangement oftentimes obtains, and to the visualizing sense in some persons they are associated with particular letters, particular sounds, or even particular ideas. Beyond a certain point it can be easily imagined that positive hallucinations must result.

The development of mental faculties, in all their relations, individual and cosmic, has been, as quite well shown by our author, the combined results of natural selection and natural evolution. Man is, after all, nothing but an insignificant factor in the universe, and simply and irresistibly does his part in carrying out the scheme of advancing civilization, of perfect organization, and higher development. As a part of the whole he is forced to be a consistent worker. It is quite surprising, in view of our author's facts and deductions, to see how little man, as an atom, an individual, can control what, for the want of a better name, we may call his destiny. Admitting modifying influences upon character or organization they are only operative to a limited extent. This is certainly an encouragement to do our best under all circumstances. Still it can hardly be expected that a man with the character of a fox can be made into one with the guileless disposition of a lamb. The difficulty of constructing a silk purse from a pig's ear is well enough appreciated by every one who has tried the experiment. Nature is one thing and nurture is another thing. Our author contributes some very interesting corroborative proof in regard to these points in his histories of twins. Notwithstanding some twins have been widely separated, have had different surroundings, and been subjected to different educational training, they have been known not only to have the same bodily ailments at the same time, but to experience simultaneously novel sensations, mental and bodily, and even to think upon the same subject at the same

time, using almost the same words to express their ideas. These, with other facts, help our author to the conclusion that illness and death are necessary incidents in a regular sequence of constitutional changes beginning at birth, and upon which external circumstances have little or no effect, or, as our author still more strongly puts it: "In cases where the maladies of twins are continually alike the clocks of their two lives move regularly on at the same rate, governed by their internal mechanism. When the hands approach the hour there are sudden clicks, followed by a whirring of wheels; the moment that they touch it the strokes fall. Necessitarians may derive new arguments from the life histories of twins."

These deductions very naturally prepare the way for a discussion of theocratic influences upon man's destiny, as may be manifested in the objective efficacy of prayer. Some very curiously suggestive statistics are presented on this point, proving that man's will is not God's will, and that faith without works is dead. In other words, no proofs are presented to show the purely objective efficacy of prayer in preventing sickness, in hastening recovery, in staying a pestilence, in changing the seasons, stopping a drought, or checking a flood. Whatever may be said of his view of the question the facts upon which his deductions lay are very interesting.

Enough has possibly been said of this truly interesting and instructive book to give the reader an idea of its purpose and scope. If not so systematically arranged as regards its subjects as might have been expected, there is this excuse to be offered, that each component part is complete in itself, each subject has been carefully worked over before as a separate article, and, as previously remarked, the author has done his best to make a proper connection between them. The reader is left free to make his own deductions, and arrange his arguments as may best suit his purpose in view of the facts presented. In a general way we may assume that the work will be valued mostly for the interesting facts it contains rather than the positive strength of many of the arguments used. In fact, not a few of the latter are loosely presented and illogical. Aside from the idea that the development of man is a part of the grand scheme of evolution, all else appears as mere conjecture. We confess that we cannot understand the subject further, and no arguments of the author have increased our light. But his facts will remain, the labor in their arrangement will be appreciated by scientist and philosopher, and his views will be suggestive if some of his arguments are wanting in conclusiveness.

Poisoning from Blue Stockings.—Dr. C. C. Stockard, of Columbus, Miss., sends us the following: "In your issue of November 25, 1882, is the report of a case of 'Poisoning from red Stockings.' I have just seen a case of poison from stockings of a different color. Willie M——, aged eight years, had been going barefoot during the summer up to the latter part of July, when he accompanied his father on a trip to Tennessee. He was absent two or three weeks and during this time wore navy blue stockings. A few days before returning home there appeared on his legs, from just above the knee down, a number of red elevations which developed pustules in three or four days and presented the appearance of ecthyma. The pustules were much thicker on the left than on the right leg, and there were several also on the back and chest. These were further advanced than those of the legs, and I regarded them as of similar nature to a crop of small furuncles which he had been having before leaving home, and on account of which he had taken the trip. He returned improved in general health and suffered only from the legs; so that I think there can be no doubt about the stockings being the cause of the ecthymatous eruption. In the case reported in The Record the poison was found to be a salt of tin used in setting the dye, but in my case I am unable to say what the poisonous principle was."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 27, 1883.

George F. Shrady, M.D., President, in the Chair.

PUERPERAL THROMBUS—ENDARTERITIS—DRY GANGRENE.

Dr. R. E. Van Gieson presented portions of the right femoral, the right popliteal, and the left femoral artery, with a portion of the left femoral vein, with the following history, by the attending physician, Dr. J. A. Jenkins, of Brooklyn: Mrs. H. H——, thirty-two years of age, of delicate frame and health, free from all specific taint, was first treated in 1876 for subinvolution of the uterus and cardiac disturbance from mitral insufficiency. In 1878 she passed through a normal confinement and made a good recovery, without increase of cardiac difficulty.

In 1880 she had an attack of rheumatism with severe præcordial pains, dyspnœa, and pulmonary congestion, from which she slowly recovered after several weeks' illness. Since that time she has been more or less under medical care, and at various intervals has taken preparations of digitalis for the relief of difficulty caused by the heart lesions. During the last pregnancy preceding her death she enjoyed unusually good health and was quite free from circulatory disturbance, and altogether free from the renal complications not unfrequently observed during the latter stages of gestation.

On April 25, 1883, she had an easy normal delivery, the child weighing about seven pounds, and fairly well nourished. Some three hours after the birth she had several attacks of syncope, apparently hysterical, relieved by stimulants and anodynes. The following morning she was comfortable and free from all pain; there was no rise of temperature during the attack. With the exception of debility and want of appetite, she did well until May 8th, when her temperature rose to 101°, reaching 102° on May 10th, accompanied with slight tenderness over the uterus. This disappeared after the administration of quinine and opiates, and turpentine stupes.

May 15th.—Had a severe attack of palpitation and dyspnœa, continuing with intermissions some three or four hours. The following five days she had again improved, and on May 20th declared herself strong enough to go down to her meals. During the night she was taken with a severe burning pain in the right foot and leg.

May 21st.—The pain continues. Temperature in the mouth, normal. The right foot and toes are extremely cold to the touch and ecchymosed. The right leg and thigh is colder than upon the opposite side, and the seat of burning, stinging pain. Fair pulsation in the femoral, but faint in the popliteal space.

May 22d.—Discoloration of the skin has extended to the ankle, and complete blackening of the skin over the lesser toes.

May 23d.—Was examined in consultation with Dr. R. E. Van Gieson. Right leg: lesser toes sloughing; skin on dorsal and plantar aspect of the foot of a dark mahogany color; external aspect of the leg discolored in spots; the skin tense, but not œdematous; the whole leg is exquisitely tender to the touch. The left leg is tender, but nowhere discolored, and extremely painful to the touch. Both extremities are cold. The right femoral has moderate pulsation, but is not compressible; the left femoral pulsates very feebly; it is difficult to determine whether, indeed, it pulsates at all. There is no pulsation in either limb at the internal malleolus. The patient lingered in great pain, but little relieved by large doses of opiates, until May 29th, when death was welcomed as a release from her intense suffering.

Permission was granted to examine the limbs only.

Necroscopy, May 29th, 5 P.M.—Both crural canals and right popliteal space examined. On the right side the

tissues in Scarpa's triangle are more adherent than in health, the sheath of the femoral vessels is thickened, the cellular tissue is abundantly infiltrated with serum. The vein and artery adhere firmly, requiring careful dissection to separate them. The right femoral vein contains a clot completely filling the vessel and partially organized. The right femoral artery from a slight distance above the origin of the profunda to some four inches below this point is filled with a firm laminated thrombus, adherent and organized, the adventitia and media are very much thickened, the intima is of a dull color, corrugated and reddened. The left femoral space showed the same condition of things in a less degree. There was less evidence of inflammatory action in the immediate vicinity of the blood-vessels, the vein and artery were adherent. The left femoral contained a clot, not adherent, apparently not organized, and not completely filling the vessel. The artery is smaller, less thickened than the right, and contains a small central fibrinous thread, not obstructing entirely the lumen of the vessel. The coats of the right popliteal are thickened, the intima lustreless, the lumen not obstructed.

The question which arises in connection with this case is whether or not the gangrene has any relation to the puerperal state. Endarteritis to this extent, completely occluding the lumen of a large vessel, is uncommon. He had seen but one similar case, which occurred in a male, and was not associated with any disease of the heart whatever. In that case gangrene began in the hand and extended up to the elbow-joint without forming a line of demarcation. The patient was seen by Dr. Markoe, who pronounced it a case of idiopathic endarteritis. Dr. Van Gieson had him under observation for some time after that, but finally he escaped from his observation and he never learned what the ultimate result was. Phlegmasia dolens is a common enough condition after parturition, but it is not limited to the puerperal woman. The question is whether the condition of things that gives rise to puerperal phlebitis might not also give rise to inflammation of the artery by extension of the inflammatory action; or whether some condition of the ovarian veins might not produce the same result. It was the opinion of the attending physician in this case that the cause of the gangrene was an embolus arising from detachment of a vegetation from the valves of the heart. Emboli, however, rarely obstruct vessels of this size, and although that may have been a factor in the etiology, Dr. Van Gieson was not inclined to give it the weight which the attending physician had attached to it. Thus far he had been unable to find a similar case. He was not inclined to attach the condition of the vessels to the puerperal state in the relation of cause and effect.

Dr. Gerster said the specimens seemed to show evidence that the assumption of the physician with whom Dr. Van Gieson saw the patient was probably the correct one. He thought that in the presence of a cardiac lesion, such a possibility of embolic obstruction was very probable. The size of the vessel thus occluded is small in the majority of cases, but there were cases on record in which the embolus was quite large, sufficiently so to completely obstruct vessels of considerable size. The view that inflammation beginning in the veins and extending into the artery did not seem to be borne out by the ordinary experience of surgeons. It is well known that not only simple adhesive inflammation, but a much more violent process, even of a septic character, involving the vein, is not usually transmitted to the arteries, and if transmission does finally occur, the arteries are involved at a very late period in the disease, and in most cases only after extensive destruction of tissues has taken place.

Another argument which seemed to support the embolic theory was the fact that the gangrene came on so rapidly. True arteritis obliterans is a chronic process, the walls of the vessel presenting an uneven appearance, with hard nodules scattered throughout the coats, so that the lumen of the artery does not retain its cylindrical shape, but presents different diameters at different portions of the vessel. In this instance, however, there was, so far as the cylindrical shape of the channel in the artery was concerned, a normal appearance, and there was arteritis, such as is usually seen after embolism has occurred. The characteristic changes of true arteritis obliterans Dr. Gerster thought were absent.

Dr. Beverly Livingston referred to a case in which the patient died sixty-two days after delivery, at the Nursery and Child's Hospital. The woman had swelling of both legs, and he was able to trace the femoral artery and veins to the spot where the clot was arrested. On the left side the obstruction began at Poupart's ligament and extended downward in both vessels until it reached the posterior part of the thigh, and also extended into the profunda. On the right side the thrombus extended downward about five inches. His impression was that there was no cardiac disease. The case was one of complicated labor, the patient being delivered of twins, and the second child was delivered with instruments about six hours after the birth of the first child.

Dr. Ferguson referred to two cases in which thrombi were found in the aorta. One case had already been reported to the Society. The second was that of a female patient who had been in the hospital for about five months, and presented all the ordinary symptoms of chronic diffuse nephritis. The heart was enormously enlarged, but there was no other evidence of valvular lesion. The arteries were atheromatous, especially the aorta, and attached to the posterior wall of the abdominal aorta was a clot. The entire clot was about five inches long, tapering at each extremity, and was attached to the wall of the vessel to the extent of from half an inch to an inch. Its central portion was completely broken down, but the external portion of the thrombus was quite completely organized. In neither of these two cases was there any evidence of valvular lesion of the heart.

Dr. Van Gieson said he wished to bring forward two points in connection with his specimen. First, was the obstruction consequent upon the puerperal state? Second was it a mere accident of the puerperal state? With the remarks made by Dr. Gerster he agreed in the main, and was ready to concede that a very extensive inflammatory action might remain constantly in the vicinity of an artery without affecting the vessel itself. That is well recognized. But the question arises whether an embolus is necessary to the production of this condition of things within an artery; whether or not the death of the intima which always precedes the formation of a thrombus, is necessarily caused by an embolus. He said no, there are other causes. There are conditions of the blood, the nature of which we do not know, which do produce death of the intima, followed by the formation of a thrombus. The question therefore is, whether this death of the intima is caused by the inflammatory lesion *per se*, through lack of nutrition in the artery itself, or whether it is caused by irritation produced by an embolus. In this case a large artery was completely obstructed. If the embolus produced the obstruction it must have been arrested somewhere in the vicinity where the inflammation was produced, or there must have been transmitted from the place where the inflammation was produced an inflammatory action which extended upward to the point where the vessel was occluded, because at that point the coats of the vessel were permanently thickened. He did not believe that it was necessary to assume that because a person has valvular disease of the heart, an embolus is necessary to cause this condition of affairs; for he had seen the same condition produced in the brachial artery where repeated and careful examinations of the heart failed to elicit the slightest evidence of cardiac disease. He did not deny that embolism was a common cause of the condition developed in his case, but that it was the

universal cause he did not believe. He thought there was in the blood of anæmic, chlorotic women, who had long suffered from disease of the heart, to which was superadded the exhaustion of child-bearing, a condition of things which might produce obstruction of the artery without necessarily supposing that an embolus is carried into the circulation. So far as the pathology of phlegmasia dolens is concerned, it is very obscure. That such a condition of things as would produce phlegmasia dolens might also produce arteritis of this kind he thought was scarcely probable. That was merely conjectural on his part. The view that inflammation had extended from the vein to the artery was also conjectural, and the theory merely occurred to him for a moment while he was reading the history of the case.

Dr. Beverly Livingston presented

TWO HEARTS FROM CASES OF CYANOSIS IN NEW-BORN CHILDREN.

Case I.—A male child, two days old, that I had under my care while interne in Bellevue Hospital. The labor had been normal; child breathed and nursed well at first, but on the morning of the third day, he was suddenly attacked with arrest of respiration, and irregular action of the heart; the face became very blue, and in a few seconds the whole body was intensely cyanosed; now the child as rapidly lost the blue color and turned red, and as the breathing and pulse became normal the skin assumed its natural color. The attack lasted about one and one-half minute. During the day the child had six similar ones, about one hour between them, the last attacks were more severe than the first, and lasted about two minutes, artificial respiration had to be employed to bring the child out of them, but after the sixth nothing would cause the heart and respiration to start again; between the attacks the child seemed perfectly well. These attacks of cyanosis came on without cause or warning, there was no muscular spasm accompanying them. Physical examination gave the lungs as normal; the heart a murmur at the base and another at the apex, both systolic. The diagnosis was an open foramen ovale and some disease of the tricuspid valve.

Autopsy.—The right heart was found very much distended with blood, the left heart nearly empty. The foramen ovale was not open, but the ductus arteriosus was. The mitral and tricuspid valves were fringed with the usual reddish, semi-transparent nodules, over which there is so much dispute. The lungs showed numerous small regions of collapse. The other organs were normal.

Case II.—A male child, born normally, of a healthy mother, at the Nursery and Child's Hospital on May 25, 1883. For the first four days the child was perfectly well; then suddenly he was found to be cyanosed, with shallow, irregular breathing, and irregular pulse; under treatment the child revived, but soon relapsed, this occurred several times the first day (May 29th), during the ensuing three days the child had similar attacks, but did not recover at any time sufficiently to nurse, and remained cyanosed; it gradually lost strength, and died on June 1, 1883. Auscultation during life had given a systolic murmur, heard loudest at the apex. No diagnosis was made. It was supposed the mother had overlain the child during her sleep.

Autopsy.—The body was of a dusky red color all over. On removing the sternum the heart seemed enlarged, but this enlargement was found to be due to the distention of the right side by dark clotted blood. The left side was empty. The foramen of Botal was widely open, as was also the ductus arteriosus. The mitral and tricuspid valves presented the usual fringe of reddish, semi-transparent nodules. The lungs were entirely collapsed except the right apex, which was partially expanded.

These two cases of cyanosis do not show any malformation, or change in the heart due to disease, that would cause the cyanosis. It is true that in the second case the foramen ovale was found very widely open, and the blood-clot passed from the right to the left auricle; still it seems to me the cause of the cyanosis lay in the disturbance of the circulation due to the collapsed lungs, and not to the open foramen ovale or ductus arteriosus. In the first case the attacks of cyanosis seemed to depend much more on the irregularity of the respiration than on the action of the heart. Henoch[1] particularly refers to diseases of the lungs as a cause of cyanosis, and open foramen ovale and ductus arteriosus, and similar remarks are made by Cadet de Gassicourt,[2] Meigs and Pepper, and others.

As to the meaning of the little nodules on the edges of the mitral and tricuspid valves, I must say I do not believe they are of an inflammatory origin, for out of 136 autopsies on children between still-births or a few hours up to three and a half years, I have never failed to find them when I looked for them, and generally the younger the child so much the more pronounced are they. It may be objected that most of these children died of disease, having had more or less fever, but that could not account for the cases dying from the effects of operative midwifery, etc., unless one insists that in these cases they had been fœtal endocarditis, which I cannot admit, neither can I accept the idea of Parrot,[3] first announced by Luschka,[4] and lately brought forward again by Henoch,[5] viz., that these nodules are the result of rupture of the intravalvular blood-vessels, causing a hæmatoma, which in the course of time underwent absorption and gave, as a result, these semi-transparent nodules; but I rather incline to the idea of Richard Pott[6] that they are remains of the fœtal valve, and are not due to any pathological process. They are composed of a collection of the normal elements of the valve, and do not appear microscopically like the deposits of an endocarditis.

The explanation of the systolic murmurs is difficult, for the only point of resemblance is the open ductus arteriosus, while the open foramen ovale in the second case might explain matters. It would not do so in the first, and I am loth to believe the fringes of nodules could have interfered with the closing of the valves. Some authors (Cadet de Gassicourt) think the passage of blood through the ductus arteriosus can cause a bruit, so this may have been the cause of what was heard. That there were bruits I am sure, but I am unable to give a good explanation of what caused them.

Dr. Livingston also presented a specimen illustrating

CONGENITAL PULMONARY STENOSIS.

The patient was a female child, aged one year eight months, admitted in April, 1882, to the Nursery and Child's Hospital for heart disease. On admission she was a fairly nourished, pale child, with good appetite, regular bowels, normal urine, and parents gave a history of congenital heart disease. She was not cyanotic, she was short of breath, preferred to remain quiet in a chair, her fingers were not club-shaped at the ends, nor was her abdomen enlarged.

Physical examination gave the lungs healthy. Heart, a murmur, systolic in character, very loud, heard with greatest intensity about the junction of the fourth left rib with the sternum, could be heard nearly with the same distinctness at apex, was heard to left of apex-beat, which was in the sixth interspace, and could be heard in the back between the scapulæ. There was a distinct fremitus when one placed the hand over the præcordial region. The abdominal organs were normal. The diagnoses were: 1, trouble with the aortic, most likely regurgitation; 2, mitral, a double murmur. I am responsible for the last.

On June 20, 1882, the child developed ulcero-mem-

[1] Kinderkrank., p. 383. [2] Traité Clinique d. Maladies de l'Enfance, t. ii., p. 48.
[3] Arch. de Physiol., No. 4, a. 5, 1874. [4] Virchow Archiv., bd. xi., heft 2.
[5] Loc. cit. [6] Jahrbuch Kinderheilk., b. xiii., s. 29.

branous stomatitis, and six days later died of septarmia, the stomatitis having been of a mild nature.

Autopsy.—The lungs were normal. Heart was hypertrophied, and the left side dilated. The three semilunar valves of the pulmonary artery are grown together so as to leave a round hole two millimetres in diameter to allow the blood to pass to the lungs, and on one side there is a small vegetation which must also have been an obstacle to the current of blood. The foramen of Botal was enlarged and open, the inter-auricular septum was very much thinned and there were some small holes through it, so it had a cribriform appearance. The mitral and tricuspid valves were normal. The ductus arteriosus was not examined. The liver presented the abnormality of having no gall-bladder, there being only one duct, and that led directly into the duodenum; the transverse fissure divided the liver in two nearly equal halves. The other organs were normal.

This is one of those cases in which there is sufficient obstruction to the blood leaving the right heart to cause the foramen ovale to remain open, and still there was not sufficient cyanosis to have called attention to it. The blood must have mixed freely enough through the foramen ovale, and still cyanosis was not produced, for the lungs were in good condition and the blood was well oxidized. This case supports the theory I put forward in the cases of cyanosis, that the cyanosis was due to obstruction to the circulation in the lungs, not to the mixing of the dark with the red blood. The autopsy explains the bruit that was heard.

Dr. Livingston further presented a specimen illustrating

CONGENITAL COMMUNICATION BETWEEN THE RIGHT SIDE OF THE HEART AND THE BEGINNING OF THE AORTA.

This heart was removed from the body of a male child, three months and twenty-seven days old, he was born in the Nursery and Child's Hospital, March 25, 1882, of healthy mother, was a strong, healthy child, and never gave any symptoms of heart disease. Being put on artificial food he got entero-colitis in July, and died on the 28th of that month.

Autopsy.—Lungs healthy, thymus gland large. Heart enlarged. On opening the aorta, just at its commencement and on the right side, a communication was found leading into the right heart; above and below the tricuspid valve it was closed by a part of this valve, and most likely no blood passed through it. The valves of the aorta are only two in number, but were sufficient to close the opening. The mitral and tricuspid valves were normal, on the mitral are plenty of those semi-transparent nodules referred to in the other cases.

Dr. Livingston also presented specimens derived from a case of

HEREDITARY SYPHILIS.

Male child, born in the Nursery and Child's Hospital May 8, 1883, appeared healthy at birth, but poorly nourished. On May 28th he developed an eruption consisting of blebs on an inflamed base, they appeared first on the soles of the feet, palms of the hands, and between the fingers, in a few days similar blebs appeared upon the limbs, body, face, etc.; after the contents of the blebs became purulent they dried up and left thick yellow scabs. There were successive crops of this eruption. Soon the anus became fissured and presented mucous patches, fissures appeared at the angles of the mouth and an ulcer on the median line of the hard palate. Sprue developed, snuffles appeared, and the child died of asthenia, June 12th, just five weeks old. The child was bottle-fed. The mother gave no specific history, but spoke of having had sore eyes. The glands were not enlarged. Child was treated by inunctions of mercurial ointment.

Autopsy, June 13th, 3.30 P.M.—Child poorly nourished, length nineteen and one-half inches. Hair well developed all over head. The remains of the pemphigoid eruption on the feet, legs, thigh, back, hands, arms, and on the face around the mouth. Lungs commencing catarrhal pneumonia in the posterior and lower portion, numerous ecchymotic spots in the anterior portions. Heart: foramen ovale open, mitral and tricuspid valves show the small semi-transparent nodules. Spleen firm, Malpighian bodies prominent, 2¾ inches long, 1½ wide, ¼ thick. Liver congested and was resistant, but could not see any change. Bones: the femur presents at the apex and lower line of ossification a marked yellow line, which is described by O. Haab [1] as due to syphilis, and he claims it to be a change in the basement substance of the cartilage due to infiltration with small cells, so causing a degenerative change but no true pus; the epiphysis can in this way be separated completely from the diaphysis. In the specimen I present, under the microscope no infiltration of round cells can be seen but rather a molecular change.

(To be continued.)

Correspondence.

OUR PARIS LETTER.

(From our Special Correspondent.)

THE VALUE OF BLOOD-LETTING IN PNEUMONIA—CREMATION IN FRANCE—SANITARY REFORMS IN FEAR OF CHOLERA—THE EFFORT TO PREVENT THE ABUSE OF TOBACCO—HONOR TO PASTEUR AND BRÉAL—DEATH OF PROFESSOR PARROT.

PARIS, August 10, 1883.

PROFESSOR HARDY lately delivered a clinical lecture at the "Charité" Hospital, on the advantages of bleeding in some cases, a remedy, he said, that was too much neglected now-a-days, and stigmatized as absurd and dangerous the practice of blindly following fashion and routine in medicine. For his part he has found it an invaluable remedy in certain forms of pneumonia, the very cases in which in his student days he was taught to employ it, and after a practice of nearly forty years, he saw no reason why he should give it up. At the same time he would not have it understood that he would employ venesection in every case, any more than he would any other remedy unless clearly indicated as in the following example: A man thirty-seven years of age, and a gardener by profession, was admitted to his ward with lobular pneumonia of right lung, and pleuro-pneumonia of the left side, of four days' standing. The constitution of the patient was apparently good, though he had had two attacks of pneumonia previously, the first in 1869 and the second in 1879. On the day of his admission the patient was bled to four hundred grammes in the morning, and the same repeated in the evening, and no medicine was prescribed beyond a little gum julep and tisane. On the third day a slight improvement had taken place in all the symptoms, but the patient was nevertheless bled to two hundred and fifty grammes, which afforded further relief, and the improvement continued steadily. On the fifth day the respiration and the other physical signs were normal, the patient began to eat and drink as usual, and he left the hospital a few days after, completely cured and without any other medication.

There exists in France a society for the propagation of cremation; but this manner of disposing of the dead meets with so little favor amongst our neighbors that it is questionable whether it will be adopted in this country. The society, however, is using its best endeavors to point out the advantages that would accrue to the public health by the adoption of cremation, instead of interments, particularly during epidemics of infectious diseases. A petition to that effect, and signed by eminent men, has been submitted to Parliament by the Société de Crémation, of which M. Kœchlin-Schwartz is president; and one member of the society, M. Cadet,

[1] Virchow's Archiv, b. 65, s. 366.

who is also a deputy, has proposed that, were cholera to break out, cremation should be made compulsory. This is evidently impossible; but there would be no valid reason why cremation ovens should not be built in two or three cemeteries as an experiment, and a means of testing public feeling in the matter. The substitution of incineration, or any other mode of disposing of the dead, for burying will be a work of time, as deeply rooted prejudices are not so easily overcome.

If cholera has not yet made its way in this country, the fear of its doing so has aroused the French from their wonted apathy, and sanitary reforms are being introduced on all sides, while others are in contemplation, so that Paris, at least, will at no distant period compare with any other city in the civilized world. Among the reforms proposed are the enlargement of the hospitals now in existence and the erection of others for infectious diseases, as well as an asylum for the aged, and another for incurable children, which are to be built outside the walls of the city, and for which the Municipal Council has granted a sum of 3,000,000 francs.

The French society against the use of tobacco has petitioned the Chambers to increase the duty upon tobacco, with the view of limiting its use as much as possible. But however advantageous this measure may be to the revenues of the State, I hardly think it would be of much service in improving the moral and physical condition of the population, which the society has in view, as it is a well-known fact that the more a thing is forbidden and the greater the restrictions put on it the more it will be sought and indulged in. Experience has shown this in regard to spirits, which, notwithstanding the heavy duty levied on it, is more than ever consumed in various forms. The practice of smoking among youths, which is growing to an alarming extent, seems to be the great care of the society, and although heavily taxing tobacco may limit its use to a certain extent yet it is evident that this measure is insufficient to prevent its abuse, and in order to produce some effect in that direction the sale of tobacco to children must be strictly forbidden; parents themselves should set a better example, and every possible means should be taken to instruct the people concerning the deleterious influence on the system of tobacco and alcohol, the two greatest curses of civilized life.

On the occasion of the jubilee of the University of Zurich the diploma of honorary doctor was conferred on MM. Pasteur and Bréal, the well-known French *savants*.

Dr. Alfred Naquet, the distinguished chemist, but better known for his political position in the French Parliament as Deputy, has been elevated to the Upper House as Senator.

Professor Parrot died on the 5th instant, at his residence in Paris, at the comparatively early age of fifty-three, and after an illness of only two months. Dr. Parrot began his studies in medicine in 1849, and passed successively through the grades of Interne, Doctor of Medicine, and Agrégé, which latter he attained in 1860. In 1876 he was promoted to Professor of the History of Medicine; and in 1877 was appointed Physician to the Asylum of the "Enfants Assistés."

One Excuse for Quick Treatment.—One of the Vienna surgeons was one day called in hottest haste to see the little son of a well-known Austrian count. On reaching his patient he found a trifling scratch on the child's hand. Sitting down and writing a prescription he gave it to one of the servants with instructions not to lose an instant, but to bring the medicine as soon as possible. "And is the danger so imminent, then?" asked the countess. "No, not that," replied the Professor; "I only feared lest the wound should be entirely healed before the servant returned."

The Best Method of Keeping a Hypodermic Syringe in working order is to try it every day.

New Instruments.

A NEW MOUTH GAG.

By W. THORNTON PARKER, M.D.,
Acting Assistant Surgeon, United States Army.

In a recent case of strychnine poisoning, it was with the greatest difficulty that I was able to introduce a stomach tube, owing to the patient's violently grinding his teeth. The tube was finally bitten in two soon after reaching the stomach, and thereby rendered perfectly useless. There being but this one tube in the hospital, the operation of the stomach pump was brought to a speedy termination. It occurred to me at that time that some sort of mouth-gag for making the operation of emptying the stomach more certain should accompany each stomach pump. I have, therefore, devised a simple mouth-gag, made for

me by Messrs. Geo. Tiemann & Co., New York, which I believe will be found very desirable for use with the stomach pump. It is made of hard polished rubber and separates the teeth sufficiently to permit the safe passage of the largest stomach tubes. A strap confines it securely and the patient cannot expel it from the mouth. It is to be hoped that it will prove to be of service.

Fort Elliot, Texas, May, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from August 18, 1883, to August 25, 1883.

Clements, Bennett A., Major and Surgeon. Relieved from duty with the Army Medical Examining Board, New York City, N. Y. S. O. 193, par. 11, A. G. O., August 22, 1883.

Middleton, J. V. S., Major and Surgeon. Relieved from duty at Fort Hays, Kan., and assigned to duty at Fort Leavenworth, Kan. S. O. 169, par. 2, Department of the Missouri, August 18, 1883.

Williams, John W., Major and Surgeon. Granted leave of absence for one month, on Surgeon's certificate of disability. S. O. 109, par. 1, Department of the Columbia, August 8, 1883.

Bartholf, John H., Captain and Assistant-Surgeon. Assigned to temporary duty at Vancouver Barracks, W. T. S. O. 109, par. 2, Department of the Columbia, August 8, 1883.

Kimball, James P., Captain and Assistant-Surgeon. Relieved from duty in Department of the Platte, and to proceed to New York City and report in person to the President of the Army Medical Examining Board for duty as a member of that board, *vice* Surgeon Clements, relieved. S. O. 193, par. 2, A. G. O., August 22, 1883.

Finley, J. A., Captain and Assistant Surgeon. Relieved from duty at Fort Concho, Tex., and assigned to duty at Fort Stockton, Tex., as Post Surgeon. S. O. 101, par. 1, Department of Texas, August 16, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending August 25, 1883.

AUSTIN, A. A., Assistant Surgeon. Ordered to Naval Hospital, New York.

CRAIG, T. C., Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the U. S. S. Minnesota.

CRAWFORD, M. H., Passed Assistant Surgeon. Detached from the U. S. S. Pinta and placed on sick leave.

WILLSON, W. G. G., Passed Assistant Surgeon. Detached from the Minnesota and ordered to the Pinta.

WHITE, CHARLES H., Surgeon. Ordered to the Museum of Hygiene, Washington, D. C.

BRYAN, J. H., Passed Assistant Surgeon. Detached rom the Museum of Hygiene and ordered to the Miantonomoh.

GUITERAS, D. M., Passed Assistant Surgeon. Ordered to the Navy Yard, Pensacola, Fla.

Medical Items.

CENTRAL SEPARATION IN PLACENTA PRÆVIA.—Dr. J. M. Ward, of Cornelia, Mo., has, during thirty years' practice, met with three cases of central implantation of the placenta, which were attended successfully, as well as an equal number of partial cases. In his experience, he mentions that examination will show the placenta separated for a short distance around the internal os, but that hemorrhage occurs only with the pains; hence he advises that the finger be introduced and the placenta peeled off as far as the finger can reach from around the os, after which he tampons until the pains become expulsive. In this view the doctor states that central separation and the tampon gives a good chance for the child, and does not materially impair the chances for the mother. In the second stage the tampon is removed and the following advised: either (*a*) to peel off the remaining placenta on one side, to rupture the membranes, turn the child, and deliver by the feet; or (*b*) after having peeled off the placenta on one side, to rupture the membranes and bring the fore edge of the placenta through the os, and hold it against the side of the vagina until the head engages. By this procedure about four inches of the central portion of the placenta is reached, leaving two inches of the circumference to maintain fœtal life and circulation. This, he advises, should be done early, by which means full dilatation is permitted, with no more laceration of the curling arteries.

HOW TO KEEP THE HYPODERMIC SYRINGE IN ORDER.—One of our subscribers, G. E. A., writes: "Your correspondent of last week desired to know how to keep his hypodermic syringe in working order. The following has been my experience. Of course the best way with any and all instruments is to use them. Next to that, *inspect them regularly* once a month—not only look at them, but look at them with an oiled rag and piece of chamois skin, more carefully in summer than in winter. In considering hypodermic syringes, aspirators, etc., the instrument should be regarded in two parts—the barrels and pistons, which require the *wet treatment*, and the needles and wire, trocar and canula, which require the *dry treatment*. If the piston-leather is old and worn out it should be renewed; but if only dried and loose from non-use, draw a little warm water into the syringe, then, placing the finger over its end, slowly press the piston downward through the water, which will be seen to pass between the piston and sides of the syringe. The water will now be both above and below the piston, and will cause its leather to swell quickly and make a tight joint. In order to keep it so discharge the water from both ends of the syringe, and treat in the same manner with glycerine, which, being hydroscopic, keeps the piston-leather in good condition. Moreover, pure glycerine will not become rancid, as will oil, etc., nor will it interfere with any chemicals used hypodermically. In the larger syringes a harder fat like mutton tallow will often cause the piston to work better than oil or glycerine. If the piston should have become so tight that it is impossible to make the glycerine pass above it, invert the syringe in glycerine or put a few drops around the piston-rod, and then slowly press it downward. The glycerine will follow into the upper chamber and will ply back and forth with the piston and keep it in order. The test for a tight piston is to put the finger over the end of the syringe, and quickly pull up the piston-rod, when, if tight, a vacuum will be formed and the piston return to fill it. The 'dry treatment' for the needle consists in blowing out all liquid from them by several quick strokes of the piston, while the needle points upward, so that no fluid from the syringe enters it; if used but seldom, let this be done in the hot, dry air just above the lamp or gas. After removing the needle from the syringe replace the wire. Should the morphia gradually form a crust upon the inside of the needles, hot water may be drawn through them, or a quicker and more thorough way is to secure from Tiemann & Co., or other instrument maker, a yard of hypodermic wire (uncut), fasten one end, thread the needle upon the other, and then with a few long strokes it is quickly cleared. When one allows his patient to suffer ten or fifteen minutes' extreme pain while fixing his hypodermic syringe, or, as I have seen, a patient almost lose his life because his physician's stomach-pump would not work, it seems duty and but little trouble to *inspect* for a few moments, the first day of each month, those instruments which ought to be kept in order."

Dr. W. N. Williams, of Indianapolis, Ind., says: "Place a piece of soft rubber between the needle end of the syringe and end of the case, thick enough with a corresponding piece at opposite end of case to make it fit the case snugly, then fill the syringe with water both *in front* and *behind* the packing, place in case and the syringe will be kept water-tight and ready for use even if it is not filled oftener than once in ten days. I should be glad to hear of a better way if there is one."

ANOTHER THREE-BARRELLED PENIS.—Dr. E. B. Ward, of Greensboro, Ala., writes: "Seeing the article headed 'A Three-Barrelled Penis' in THE RECORD of August 11, 1883, brought to mind a similar case of mine. A young gentleman called at my office for treatment, and on examination I found that the same anomaly occurred in this case as the one mentioned by you, *i.e.*, the meatus presented three distinct openings. Not only was this anomaly of the penis confined to him, but his two other brothers presented the same rare specimens of malformation."

THE SO-CALLED ABORTION OF TYPHOID FEVER AND THE INVESTIGATION OF PRETENTIOUS CLAIMS.—Dr. E. Ruthven Young, of this city, writes: "Having long been an eager and instructed reader of THE RECORD, in perusing its number of May 26th, I came across, to me, a rather unsatisfactory article, headed, 'A Confident Correspondent.' In it you will readily see, by reference to your file, that a Dr. Davy, of Ohio, takes a decided exception to an article published in a February number of the *Medical Age*. The writer of this latter seems to have made in it the assertion that 'Typhoid fever is a disease which is uncontrolled and uncontrollable, and *any one* who says he can abate an attack or cut short the disease after it has passed the forming stage is either *a knave or a fool.*' Dr. Davy, in his short comment on this, says, after a reference to poor Galileo as being badly used for his great discovery, that 'within the next five years typhoid fever will be controlled almost as easily as remittent or marsh fever.' God grant he may be right in this, for if so, surely we will have a weapon second only to Jenner's vaccination. Further, he says 'a patient can

be gotten into a convalescent condition in from four to six days after the following symptoms are fully developed: temperature, 105°; pulse, 100 to 120; nervous symptoms with delirium well marked; tongue dry and cracked; articulation indistinct; bowels tympanitic, tender, and gurgling; diarrhœa of ochre-colored stools, etc. Ninety per cent. of such cases can be gotten up and about in 12 to 18 days by *proper medication.*' Now, Mr. Editor, such an assertion attracted me at once. Having read widely concerning typhoid, and never having heard of anything so nearly approaching a specific as this seemed to promise, I determined to avail myself of the professional courtesy of Dr. Davy and obtain this valuable knowledge. Yet even then it struck me as peculiar that the doctor should stop so suddenly and give the world of physicians no clue as to what this 'proper medication' was. What a pity such knowledge existed and the profession not have it and their suffering patients its benefit! In answer to my anxious letter of inquiry, I received a letter from which I give sufficient extracts for my brothers in ignorance to learn as much as I did: 'Dear Doctor, etc.—We have never given the chemical working formula to any one. We have spent much time, hard study, and money in obtaining our knowledge, and as some chemist has to prepare the compound, we thought it but right to retain the formula. Any one desiring the therapeutical knowledge and sufficient of its chemistry, so that they may handle cases of typhoid fever just as intelligently and successfully as we have done or can do, such information will be cheerfully given. The medicine will be manufactured by —— & Co., and sold at two dollars a pint.' Now, Mr. Editor, where are our much-talked-of ethics? To which class does this compound belong, patent or proprietary? Perhaps it may be valuable, but as a 'secrect nostrum' it will never be respected or used by our noble brotherhood of *true* physicians."

Medical Men in Paris.—The Paris correspondent of *The Lancet* states that a list of the members of the medical profession, practising in its various branches in Paris and its environs, has been drawn up under the orders of the prefect of police, and consists of 1,915 doctors of medicine, 12 doctors of surgery, 83 officiers de santé, 43 foreign medical men, 1,500 sages-femmes, 845 pharmaciens, and 95 veterinary surgeons. The list is to be posted up at each police station for the benefit of the public, and at the same time to act as a check upon those who have no right to practise. Among the foreign medical men authorized to practise in France, ten obtained their diplomas or degrees at the Faculty of Jena, the others in various universities of England and Germany. Among the doctors of medicine there are two ladies, one French and the other Russian. This list would give an average of one medical man to about 1,100 inhabitants, the population of Paris being estimated at 2,239,928. The following interesting information has also been obtained by the prefecture *à propos* the above list. The senior medical man, according to age, is M. Ségalas, who was born in 1792, and took his degree in 1817. Next in seniority comes Dr. Ricord, the celebrated syphilographer, who was born in 1800, and took his degree in 1826. The oldest sage-femme is established at Bourg-la-Reine, in the Department of the Seine. She obtained her diploma in 1815, since which she has continued to practise without any interruption. She declared at the prefecture of police that during the sixty-eight years she has been in practice, she had, on an average, 100 accouchements a year, so that she has during that period brought 6,800 children into the world.

Treatment of Genu Valgum by the French Surgeons.—Dr. A. J. Steele writes concerning the above subject (*St. Louis Courier of Medicine*) as follows: "At Lyons I was warmly received by MM. Mollière, Robin, and Delore. All had done original work in the matter of genu valgum or knock-knee, and I was anxious to learn more of their investigations and treatment. Delore is more especially interested in and is teaching obstetrics and gynecology, but several years since he investigated the subject of in-knee, and proposed as a method of treatment fracture through the epiphyseal junction both of the femur and tibia. This is done by manual force over the edge of the table. The limb being thus straightened, is put up in starch or plaster-of-Paris dressing, and the patient allowed to be up and about; union occurs in an improved position. He reports cases thus treated and cured. But I do not find that his professional brethren are very generally adopting this method, many preferring in the young subject to employ mechanical appliances worn for a long period, and thus gradually straightening the limb. In the youth and young adult, M. Robin breaks the femur above the epiphyseal junction with an osteoclast of his own devising. M. Mollière, surgeon-in-chief of the Hôtel-Dieu, has in many cases adopted this method very satisfactorily. He showed me in his wards several cases that had undergone the operation, some still in the starch dressing, and others with it removed, all doing well and with no untoward results. At his kindly suggestion M. Robin applied his instrument to the limb of a cadaver in order to illustrate its action to me. It was an adult subject, and the femur was broken very readily with his osteoclast just above the condyles. On cutting down upon the part the periosteum was not, at least on the anterior part of the femur, broken, though the bone was fractured entirely through. In badly united fractures, and in anchylosis of the knee and hip-joints, the same instrument has been used by them to break up the part and allow of improved reposition."

Small Doses.—Dr. Thorowgood says regarding the use of small doses:—"I have come to the conviction that the doses of many medicines, as set forth in books, are often needlessly large, when we seek, not an eliminant or evacuant effect, but a gradual alterative or specific action from the remedy. There is probably no medicine regarding the definite action of which physicians agree better than iron; but is it necessary for the cure of facial neuralgia to give an insoluble powder like the hydrated oxide of iron in a dose ranging from thirty grains up to three or four drachms? The subnitrate of bismuth, another insoluble powder, has been given for the relief of gastric pain in such large doses that, after death, large, hard, black masses of concrete subnitrate and sulphide of bismuth have been found blocking the intestinal canal. The gentleman who made the post-mortem said the masses he removed looked like lumps of metal." As to calomel, he has seen marked beneficial results from the administration of doses of one-third of a grain, and he has found patients do much better with doses of two minims of tincture of aconite than with doses of five to fifteen minims as prescribed in the British Pharmacopœia. He also advises small doses of liquor arsenicalis for the relief of spasmodic asthma, and he has seen excellent results from the persevering use of small doses (one-fiftieth) of a grain of strychnia in promoting the restoration of exhausted nerve-function, "while larger doses do but add to irritation and eventually increase the exhaustion." Tincture of nux vomica taken in doses of one to two minims, fasting every morning, he has found useful in the cure of chronic constipation.

A Curious Instance of Fear of being "Buried Alive" has just been brought to notice by the proving of the will of Major Andrew Gammell. This gentleman deposed that a sum of one hundred guineas, free of legacy duty, should be paid to Mr. Barnard Holt, F.R.C.S., or failing him, some equally eminent surgeon, as a fee for surgical examination of his body after death.

Bartholow's "Practice."—It has been stated that Bartholow's "Practice of Medicine" is being translated intol Chinese for the benefit of the physicians of the Celestial empire.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 10 NEW YORK, SEPTEMBER 8, 1883 Whole No. 670

Original Articles.

INTESTINAL INDIGESTION.

By J. MILNER FOTHERGILL, M.D.,
LONDON, ENGLAND.
[ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A PRACTICAL distinction may be drawn between gastric and intestinal dyspepsia; indeed, has been drawn between the two. In order to make this discrimination we follow the time of each part of the digestive act. When discomfort commences immediately after the introduction of food into the stomach, we regard the stomach as being the seat of the malady, as when there is a gastric ulcer present, for instance, or great irritability. When feelings of discomfort are quickly experienced, and after some time the food is vomited, little affected by the digestive act, and mixed with much mucus, then we suspect that there is gastric catarrh present, and that the food, rolled over and over by the muscular action of the walls of the stomach, becomes covered with a layer of mucus, through which the gastric juice cannot penetrate. The offending mass is at last rejected by vomiting, or is passed into the bowels and got rid of by purgation.

But at other times the symptoms complained of carry with them other interpretations. When there is little discomfort, either pain or flatulence, experienced until some considerable time after a meal, then we suspect the malady to lie rather in the duodenum and its relations, than in the stomach itself. For instance, a little time ago a gentleman from Ireland presented himself with this association of symptoms. He was over fifty years of age, strongly and broadly built, had lived well, even freely, and never knew anything of indigestion until within the last year or so. Since then he has had evidences of gouty indigestion with acid eructations, and considerable lithates in his urine. There is also some enlargement of his liver. But the significant symptom of all, to my mind, is this—his discomfort comes on from one to three hours after meals. Now we know as yet very little of the prodromata of cancer of the stomach before the familiar, well-recognized condition is established of pretty constant pain, little relieved by vomiting, acidity of the stomach, constipation, emaciation, with the development of the cancerous cachexia, and in time, especially when pyloric, the development of a tumor. There is, however, a stage anterior to this. Any one who has been able to keep a patient under observation for considerable periods knows how far from rare it is for chronic dyspeptics to die with unquestionable cancer of the stomach. Nor is it difficult to conceive that such should be the case—disturbances of function preceding organic changes; just as failure of functional power in the brain may pass away under appropriate measures; or, under other circumstances, pass on into that condition commonly spoken of as "softening of the brain," that is, of organic change. Probably no one can always be sure what the resultant outcome of a distinct failure of brain-power may be. So with the stomach. A long history of functional disturbance culminates in organic disease. But when a well-nourished man, who has never known what it was "to have a stomach," begins to suffer from acid dyspepsia, and has pain from one to three hours after a meal, then the suggestion of cancer of the pylorus forces itself upon one. Little relief had been afforded by the ordinary bismuth mixture, and this was not without its significance. The case will be watched carefully to see what its further development may be.

The pylorus is in firm contraction for some time after a meal, so as not to allow the contents of the stomach to escape until fairly acted upon by the digestive fluid, and then it relaxes and allows the contents to escape into the duodenum. Why pain should be experienced until the ring relaxes is not quite clear; but the pain of pyloric cancer certainly is not particularly linked with the introduction of food into the stomach, as is that of gastric ulcer, and is not specially experienced when the ring is closed. As the case progresses the pain is more continuous; that is, when the ring is relaxed and contracted alike. Then there was the freedom from all gastric trouble till that time of life was reached when cancerous growths become common. There was, also, the negative results from appropriate treatment. The *tout ensemble* of the case was, to my mind, that of commencing cancer of the pylorus. The case was one of much interest; the more that a curious case of indigestion and vomiting, sometimes of blood, came indirectly under my notice some time ago, where opinions had varied, within narrow limits, and which turned out ultimately to be an ulcer situated within the pyloric ring itself.

More commonly pain with fulness is complained of from one to one-half hour or more after meals, *i.e.*, at the time when the food is passing out of the stomach into the duodenum, when we may fairly believe the following to be the case. Normally the acid contents of the bowel, when passing into the duodenum, are mixed with the alkaline bile to the extent not only of neutralizing their acidity, but of positively rendering them alkaline, so that the pancreatic fluid may be operative. But in those cases of duodenal dyspepsia it would seem that the alkaline tide from the liver is insufficient to perform this neutralization, and the pain and discomfort follow, the duodenum resenting the presence of an acid fluid. Whether this pain is due to this acid irritation solely, or there is muscular spasm set up thereby, may not yet be affirmed, the observations made so far being scarcely sufficiently minute. (The difficulty of making minute observations, when they have to be made through the medium of the patient's sensations, are self-apparent to any one.) When, however, the pain and discomfort come on at the time the food is passing into the duodenum, and are referred by the patient regionally to the duodenal area, and at the same time the stools are defective in bile, then duodenal dyspepsia is the probable cause of the symptoms. If, beyond this, a pill of ox-gall with castile soap, some two hours after a meal, is beneficial, and the addition of liquor pancreaticus sheathed by an alkali gives decided relief, then the diagnosis of duodenal dyspepsia is fairly established.

It would also be well to put the patient upon a dietary of farinaceous material and milk, so as to do away, to a great extent, with acid gastro-pepsin digestion, and develop alkaline intestinal trypsin digestion. The farinaceous material, with milk, might be guarded by some prepared chalk or calcined magnesia, to neutralize gastric acid digestion. By such means the acid condition of the duodenum is removed, and with it the discomfort. Milk sheathed with an alkali is just as much indicated in a case of duodenal dyspepsia as it is in the condition of gastric ulcer, where it is desirable to get the food through

the stomach with as little disturbance of that viscus as possible.

By the light of recent physiology such cases are beginning to be apparent, and it is possible to discriminate them, partly by their semeia, but still more by the effects of treatment. Duodenal dyspepsia is linked with those cases where fats are not assimilated, and where cod-liver oil passes the anus *en masse*. In such cases the ox-gall and castile soap, taken an hour or so after a meal, gives relief in time, and enables the oil to be emulsionized, and after that to be taken up by the lacteals. This kind of case comes but comparatively little under the notice of the consultant, and it is to the observant family practitioner we must look for the record of these cases, and the effects of treatment. A sufficiency of cases only to furnish a strong surmise have come under the notice of the writer. If his readers will help by the publication of a few well-marked cases the diagnosis, and with it the rational treatment, duodenal dyspepsia will probably soon become a recognized matter.

Intestinal indigestion is also seen under other circumstances, viz., *lientery*. This word is old-fashioned, but is not obsolete. Here the food, but little changed by the digestive act, is voided per anus a brief while after being taken. The stomach passes the food into the intestines, and they sweep it along to the place of exit too speedily for any real digestion and absorption to take place. Lientery is found with children who may have had measles, with the low muco-enteritis which is apt to follow that exanthem, or in cases of mesenteric disease. Frequently large quantities of acid mucus are voided with the undigested food. Here alkalies with catechu or hematoxylin are indicated, with the inevitable milk dietary.

In tiny children an hyperæsthetic condition of the intestines is often seen, where the ordinary vermicular movements cause pain, the child crying the peculiar long abdominal wail, corresponding with the vermicular twist acting on the bowel, the seat of the muco-enteritis. The movements of the intestines may be felt through the thin abdominal walls, with or without flatulent distention. The stools smell sour. Here again alkalies are indicated, as prepared chalk with tincture of cardamom, or the bicarbonate of potash with cajeput oil; both useful combinations. Here the indications for treatment point to the neutralization of the acid formed in the intestine, together with the administration of a carminative of some kind (carminatives allay the energy of the intestinal peristalsis, and relieve painful vermicular action).

Such conditions are as much intestinal dyspepsia as they are anything else, as the digestive act is both painful and inefficient. It must be remembered that the different ferments of the pancreas are all alike only operative in an alkaline medium, and that in the presence of an acid they are inert. Consequently when the alimentary tract is acid, whether by acid formed in the stomach or formed below the stomach, or from the chyme being acid because the natural alkali in the bile is deficient, then the digestive ferments of the pancreas are killed and wasted. In the child, indeed, digestion is far more pancreatic than gastric; and such acidity of the bowel is very pernicious. When the acidity is greatest low down in the bowel it is well, as Prout pointed out, to use the fixed alkalies (chalk and calcined magnesia), which are not converted into soluble salts in the stomach, but which pass along the intestines and neutralize acid all along the alimentary tract. But such acidity is not confined to infants, and is seen in adults. The question of how far a little mercurial, especially as gray-powder, is useful in such conditions of acidity may be raised. Some authorities are in favor of such medication, and certainly in those cases where the acidity appears due to deficiency of the alkaline salts of the bile, it would recommend itself. Of course, with very delicate children, not being congenitally syphilitic, caution is requisite in prescribing mercurials; but at the present day the caution is so excessive that mercury is avoided altogether by some practitioners. To eschew mercurials altogether is fanaticism, therapeutic fanaticism, nothing more.

There are other conditions of intestinal dyspepsia less commonly encountered, which may just be alluded to. In a case of confirmed indigestion, due to long sustained overwork in establishing a commercial enterprise in Russia, which came under notice lately, the discomfort was referred to the transverse colon, and was mainly experienced about three hours after a meal. Sweet things and sour things, all seasoning whatever, were an offence; while, as the patient said, "I don't eat enough to nourish me, and if I did, I should not digest it!" His complaint was a just one. However, he did improve sufficiently to revisit Russia; but at Kief he caught dysentery, and just managed to get back to England before being completely prostrated. The attack was not a severe one, for a healthy person at least, and there was no thickening of the colon, that either Sir Joseph Fayrer or myself could detect; but the uncomfortable sensations referred to the transverse colon were very troublesome, and being about persistently. Gradually they declined, and now the patient is again making headway, still having to be very particular about his dietary. If such cases scarcely fall under the heading "indigestion," they do, however, come under the heading "dyspepsia," and they require a most careful dietary. In this particular case small quantities of liver-stimulants only were required, as much bile in the fæces irritated the bowel not a little.

Cases like this may easily be mistaken for gastric indigestion, if the observation as to the time after a meal when the discomfort is experienced be not properly made. In my former article on "Atonic Dyspepsia," the methods of treating primary gastric indigestion were laid down. Here it may be said that the liver requires to be roused, and bile supplied to the chyme, either by increasing the flow from the liver, or by giving ox-gall in pill, either with or without castile soap, until a sufficient natural flow is secured. By such means, and by the exhibition of liquor pancreaticus and fixed alkalies much may be done for those cases of dyspepsia which lie below the pyloric ring; in other words, for dyspepsia in the alkaline area of the alimentary canal. How far the pancreas can be stimulated by either, as first suggested by Balthazar Foster, and approved by a Medical Commission in the United States Army, in cases where the assimilation of fat is deficient, is a matter of practice which calls for more attention. But by the use of hepatic stimulants, which includes the rational resort to mercury, alkalies, and artificial pancreatic secretion, and an appropriate dietary, much may be done where intestinal digestion is painful or is imperfect. The main thing to be done is to discriminate what is amiss, and then how may it be remedied. For both, perfect familiarity with the digestive act, its divisions, and the time after taking food when each occurs, is absolutely requisite. When it is found out where the difficulty occurs then the appropriate measures can be adopted. And it may be the symptoms are not experienced in the abdomen at all when the malady lies below the pylorus. When imperfectly digested products are poured into the portal circulation the main complaint may be psychical, as lowness of spirits, oppression, or panphobia, occurring two or three hours after a meal. Or may be lithates are freely formed, and, in some cases, irritability and discomfort in the urinary passages are set up as soon as these mal-products reach the bladder. In such cases alkalies with some pancreatic preparation will often give much relief, especially if at the same time the dietary be strictly regulated; and hepatic stimulants are certainly of service.

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ON THE PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS AT THE EARLIEST PERIOD OF ITS DEVELOPMENT.[1]

By R. W. TAYLOR, M.D.,

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THE importance of the early recognition of the initial lesion of syphilis is so great that any facts tending to enlighten us in this direction are of more than ordinary value. In the *American Journal of Syphilography and Dermatology* for July, 1871, I published the description of the appearance of an initial lesion of syphilis, as observed on the first day of its evolution. These appearances were such that scarcely any one would have suspected that the seemingly insignificant spot was really the starting-point of syphilitic infection.

From that date until May, of this year, I had not met with a similar case, but at that time a second one came to my notice. I shall, therefore, give the details of these two cases, which present clearly marked features of the hard chancre, which had also been observed years ago by my friend the late Professor William Boeck, of Christiania, as he informed me in an oral communication, but which have not, I believe, until now, been described by any one but myself. In connection with the description of this peculiar appearance of the hard chancre at its earliest period of evolution I will try to present the other appearances which it usually presents, since by this course more completeness to the general picture is gained. In addition, I shall speak briefly of the appearance of the initial lesion of syphilis in children in its very earliest days. The first case is transcribed nearly verbatim from the journal before mentioned.

M. M——, a native of Poland, came to the New York Dispensary, January 17, 1870, and presented a peculiar lesion on the penis. Upon the inner aspect of the right lip of the meatus urinarius was a spot about the size of the heads of two pins, which presented a silvery appearance. The spot was not at all elevated, but directly continuous, without any elevation or fissure with the surrounding membrane, and there was no fissure, however slight, to be seen through the spot itself, even with the aid of a magnifying-glass. I thought that perhaps the man had cauterized it with nitrate of silver, but he declared that he had not interfered with it at all. He stated that he had for the first time observed the spot that morning. It was evident that the lesion consisted in some change produced in the superficial epithelial cells of the part. Professor W. Boeck, of Christiania, being present at the examination, remarked that he had seen the initial lesion of syphilis once or twice before begin in this manner upon the penis, and that he had often observed it to commence in this way in the mouths of children. In two succeeding days the area of the silvery patch increased very little, and in four days a small amount of induration could be distinctly felt, since the parts were so accessible to careful manipulation. In a week a distinctly marked indurated nodule was formed, which very much everted the lips of the meatus. The inguinal ganglia had by this time become perceptibly hard and swollen. When the nodule, which though no larger than a small pea, but which was very firm in consistence, had existed about a week, the epithelial scales which covered it were cast off, and a very slightly grayish exulcerated surface was observed, the granulations of which were very small, and it was covered with a very scant viscid secretion. This indurated ulcer remained in a sluggish condition for six weeks, when a roseola erythema of fauces and general malaise supervened, which were treated by mercury and disappeared quite rapidly. For two years the man had various lesions, but owing to persistence in treatment he was cured, and has since been well.

On May 20, 1883, a gentleman, who shall be nameless, came to me in great anxiety and fear regarding a suspicious connection he had had the night before. He was a man forty-four years of age, who since his marriage, twenty years previously, had had no intercourse with strange women, and had been true to his wife. His recollection of the night previous was a hearty dinner and much champagne; and in the morning he awoke in a brothel in the arms of an aged siren. Though assured most solemnly by this woman that she had no disease, he became greatly worried and sought me to determine whether he had contracted any venereal trouble. I frankly stated his probable dangers in gonorrhœa, chancroid, and syphilis. So great was his anxiety that he came to me for examination every day, and suffice it to say he did not contract the two local forms of contagion. On the twelfth day, absolutely nothing abnormal having been observed on his penis up to that time, I saw a small oval spot of a glistening silvery appearance on the dorsum of the glans penis midway between the meatus and the balano-preputial furrow. This small spot was of about the size of three small pin-heads, and was distinctly visible at all times, since the prepuce was very small and barely covered the base of the glans. Recalling my experience with the afore-described case, I informed the gentleman that he had very probably contracted syphilis, and that his domestic quarantine must still be rigidly followed for fear of infecting his wife. The patient's fears were such that I had almost daily opportunity to observe the development of this lesion. Its course was briefly as follows: The silvery spot increased in area slowly. Its surface was perfectly unbroken, and during its early days it could be distinctly seen that the morbid process was superficial and confined to the epithelial layer; moreover, there was no circumferential hyperæmia. Thus increasing, at the end of ten days the spot occupied an area of a line in diameter, and was round. From this time on deeper changes were observed, thickening of the uppermost layers of the mucous membrane was distinguishable in about fifteen days, and sharply marked parchment induration was clearly felt on the twentieth day. Swelling of the inguinal ganglia was discovered on the eleventh day. The silvery appearance of the nodule was well marked until about the fifteenth day, at which time it might have been mistaken for a papule of lichen planus. From this date onward the silvery gloss grew less, redness appeared over the surface, and in twenty days from its appearance the chancre was typical in its appearance—a smooth exulcerated surface, sharply defined margin, and an abrupt elevation. On July 13th, an erythematous syphilide came out over the epigastrium and abdomen, and in a week it covered the whole body.

The point of interest of these cases consists in the peculiar, localized, silvery appearance of the mucous membrane of the glans penis, which were soon to be the site of the true Hunterian chancre. The importance of the early recognition of the nature of this lesion is well shown in this case, since it is very probable that a person who had never before seen it, would have regarded it as insignificant, and would not have prevented the gentleman having intercourse with his wife. The practical conclusion is this, that at its evolution the initial lesion of syphilis may appear simply as a small, unelevated, silvery spot, seated in the mucous membrane, without any inflammatory areola. This spot may thus remain superficial and free from ulceration and induration for nearly two weeks, after which time, and even before, it may increase in development and assume the appearances of a typical indurated chancre. In this connection I may add that there are two other appearances presented by the initial lesion of syphilis at its earliest period. The first appears simply as a minute, sharply rounded, excoriated spot, the surface of which is neither elevated nor depressed, and appears like a most superficial erosion of the epithelial cells of the mucous membrane. Generally these spots are of a sombre red color, which later on may become

[1] Read before the American Dermatological Association, at Lake George, August 30, 1883.

coppery red, and usually are not the seat of hyperæmia. Their future course is one of extension on the surface and in depth. In somewhat rare instances numbers of these spots, from three to as many as a dozen, may appear, and then we have the multiple herpetic form of chancre of Dubuc. The third and last of the earliest appearances of the initial lesion of syphilis is in the form of a small, slightly elevated papule, having a dry unbroken surface. This form of chancre, the *papule sèche* of Lancereaux, is mostly seen in persons having short prepuces, and in those who have none, or but the rudiment of one. It begins in this subacute, indolent, and insidious manner, and may run its whole course without any ulceration or excoriation, or it may follow the course of the indurated nodule, or become transformed into the parchment-like chancre.

It is needless to add that it is important to bear these peculiar appearances in mind, as by so doing and by acting on the warning given by them, much misery may be spared.

In this connection I may add that I have several times in my life confirmed the statement of Professor Boeck, to the effect that in children the initial lesion often begins as a very minute, shining, and silvery spot, similar to those just now described. I well remember an instance of a child, infected by its wet nurse, at the tip of whose tongue, a little to the right side, was a minute linear spot, which appeared as if cauterized by the pencil of nitrate of silver, and which went on to form a large indurate nodule, which was followed by syphilis. Also I can now picture in my mind a small spot, such as I have now fully described, on the lower lip of an infant, which later on became an enormous Hunterian chancre. The practical indications of these facts are obvious.

OBSERVATIONS ON THE ACTION OF NEW REMEDIES.

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In December, 1882, at the suggestion of my visiting physician, Dr. J. J. Reid, I began a series of observations on the therapeutic results obtainable from certain drugs, to which professional attention has more recently been drawn. As House Physician of the second medical division at Charity Hospital, a large field for study was open to me, and considerably over one hundred cases were recorded. These experiments lasted from December 1, 1882, to April 1, 1883, and were made with the following drugs:

1. Convallaria maialis, fluid extract.
2. Manaca, fluid extract.
3. Eucalyptol.
4. Yerba santa, fluid extract.
5. Chekau, fluid extract.
6. Ol. gaultheriæ (in rheumatism).
7. Lippia Mexicana, fluid extract.
8. Quebracho, fluid extract.

The first one of the list, the lily of the valley, is the most important, and at the present moment far the most interesting one of the series. I shall therefore give, in somewhat fuller detail, the account of the results obtained with it.

1. *Convallaria.*—The cases treated with this drug numbered fifteen in all, there being nine cases of organic heart disease, five cases of cardiac failure from various causes, and one case of Bright's disease. The preparation used was the fluid extract.

Case I.—Hannah B——, aged forty-three; mitral regurgitation, marked hypertrophy, and probably dilatation, dizziness; pain and palpitation very marked; pulse, 84, very irregular, both in force and frequency; respiration, 48; temperature, 98¼°. January 20th: Convallaria, fluid extract, gtt. x. t. i. d. January 24th: Pulse about 90, but so irregular as to be almost uncountable; pains same; occasional attacks of cardiac asthma; convallaria, gtt. xx. t. i. d. January 27th: Pulse, 105; no improvement; convallaria stopped; ordered tr. dig. gtt. v. t. i. d. January 31st: Pulse, 84; unimproved; tr. dig. gtt. x. t. i. d. February 10th: Somewhat easier; pulse, 96; same. February 21st: Pulse, 90, still as irregular; tr. dig. gtt. xv. t. i. d. February 25th: Slight improvement in palpitation and pain; pulse 84, same; digitalis stopped; ordered convallaria, gtt. xx. t. i. d. February 28th: Pulse, 90, less irregular; convallaria, gtt. xxx. t. i. d. March 2d: Pulse, 75. March 4th: Heart rhythm no better; palpitation and pain much relieved; convallaria, gtt. xl. t. i. d. March 5th: Pulse, 96, irregular; convallaria, ʒ i. t. i. d. March 7th: Pulse, 90, same. March 10th: Pulse, 90, unimproved; convallaria stopped.

Case II.—Justin McC——, aged fifty-two; mitral regurgitation; pulse, 84, irregular in force, feeble, occasionally intense; dilatation. February 28th: Attacks of dizziness; convallaria, gtt. v. t. i. d. March 2d: Pulse, 66, stronger, still irregular. March 5th: Pulse, 60; dizziness better; convallaria, gtt. x. t. i. d. March 6th: Pulse, 60, as irregular as ever; general condition—pain, dizziness, etc.—much improved. March 8th: Discharged at request.

Case III.—John J. D——, aged thirty-one; mitral obstruction, cardiac hypertrophy; cardiac beat irregular in force and frequency; palpitation, dyspnœa, etc.; pulse, 120. January 25th: Convallaria, gtt. x. t. i. d. January 29th: Pulse less irregular, but just as frequent; convallaria, gtt. xv. t. i. d. February 1st: Pulse, 120, irregular; feels better; palpitation somewhat less; convallaria, gtt. xxx. t. i. d. February 5th: Pulse, 78, irregular in force and frequency. February 8th: Pulse, 96; much more comfortable; palpitation much improved; no dyspnœa; can go up and down stairs easily. February 22d: Discharged, in fair condition.

Case IV.—Alexander McM——, aged twenty-three; mitral regurgitation and aortic obstruction; considerable hypertrophy, dyspnœa, palpitation, pain, cough, and blood-streaked sputum; pulse, 80, regular, fairly strong. January 15th: Convallaria, gtt. v. t. i. d. January 19th: Considerable dyspnœa and pain; phlegm blood-streaked; pulse, 72; convallaria, gtt. x. t. i. d. January 23d: Same; convallaria, gtt. xx. t. i. d. January 26th: Pain considerably better; palpitation and dyspnœa as before; convallaria, gtt. xxx. t. i. d. January 30th: Pulse, 72; condition same. February 2d: Pulse, 72; symptoms no better. February 6th: Pulse, 84; convallaria, 3 i. t. i. d. February 8th: Pulse, 72; precordial pain undoubtedly better, but otherwise no change. Treatment stopped.

Case V.—Patrick H——, aged twenty-four; mitral regurgitation and aortic obstruction; hypertrophy; much precordial pain; pulse, 90, and rather feeble; dyspnœa, but especially palpitation and pain. February 27th: Convallaria, gtt. x. t. i. d. February 28th: Pulse, 84; somewhat better; dyspnœa and palpitation as before; convallaria, gtt. xx. t. i. d. March 2d: Breathing better, and steadily improving; less palpitation; pulse, 96, fairly strong; convallaria, gtt. xxx. t. i. d. March 3d: Pains in side began again; pulse, 90; convallaria, gtt. xl. t. i. d. March 5th: Much precordial pain; palpitation undoubtedly less; pulse, 90, small and hard; convallaria, 3 i. t. i. d. March 6th: Pulse, 80, much improved, full and strong; little pain. March 7th: Pulse, 90, good; general condition fair; no pain. Discharged at request.

Case VI.—Patrick E——, aged fifty-six; mitral regurgitation and aortic obstruction; but little hypertrophy; headache; feet slightly swollen; urine negative; pulse, 120, feeble. January 22d: Convallaria, gtt. v. t. i. d. January 29th: Pulse, 120, fuller; headache; swelling gone down; much cough; convallaria, gtt. x. t. i. d. February 1st: Pulse, 132; headache bad; convallaria, gtt. xx. t. i. d. February 6th: Pulse, 96, much improved in tone; headache and tightness in head; convallaria stopped.

Case VII.—Rose McG——, aged thirty-six; mitral stenosis and insufficiency, aortic stenosis, dilatation, great dyspnœa, and palpitation; feet slightly swollen; urine negative; pulse, 108, irregular and intermittent; fluttering and oppression around heart. Treated with digitalis, caffeine, etc., with slight result. January 18th: Pulse, 100, irregular; convallaria, gtt. x. t. i. d. January 20: pulse, 66, fuller, but irregular; fluttering somewhat better; convallaria, gtt. xx. t. i. d. January 24th: Pulse, 86, fair; feels better; fluttering less; can rest better at night; convallaria, gtt. xxv. t. i. d. January 27th: Pulse, same, still irregular. February 10th: Pulse, 84, fairly good, irregularity of beat quite unaffected; little dyspnœa or palpitation; convallaria stopped.

Case VIII.—Theresa K——; mitral regurgitation; mitral stenosis; aortic stenosis; dilatation; palpitation; dyspnœa; cardiac pain; severe dyspnœa in spells; cough; phthisis, second stage, etc.; pulse, 108, moderately strong. January 20, 1883; Convallaria, gtt. xv. t. i. d. January 22d: Feels very bad; breathing labored; violent palpitation; much dyspnœa and pain in side; pulse, 120, small; convallaria, gtt. xxx. t. i d. January 23d: Pulse, 113, small. January 24th: Pulse, 108, slightly stronger; slightly nauseated by drops; convallaria, gtt. l. t. i. d. in milk and lime-water. January 27th; Pulse, 108, improving; cardiac distress unaffected; vomited several times last night. Convallaria stopped; ordered cerii oxalas, gr. xx. t. i. d. January 29th: Vomiting better; pulse, 104, small; dyspnœa, palpitation, pain, as before; convallaria, 3 i. t. i. d. January 31st: Negative result; dyspnœa very bad; convallaria, 3 ij. t. i. d. February 1st: Nauseated again, the palpitation, dyspnœa, and precordial pain entirely unaffected; convallaria stopped.

Case IX.—Charles S——, aged forty-two; mitral regurgitation, aortic stenosis, and aortic regurgitation; hypertrophy; dyspnœa marked. January 26th: Pulse, 84, small and jerking; convallaria, gtt. xx. t. i. d. January 30th: Pulse, 78, regular; dyspnœa and pain unimproved; convallaria, gtt. xl. t. i. d. February 2d: Pulse, 84; but little improvement; convallaria, 3 i. t. i. d. February 6th: Pulse, 108, fuller and stronger than before; precordial pain somewhat less; no change in dyspnœa and palpitation. February 8th: Little result from convallaria, ordered stopped; tinct. dig. gtt. x. t. i. d. February 9th: Less pain; pulse, 84; tinct. dig. gtt. xx. t. i. d. February 16th: Pulse, 72; dyspnœa marked; tinct. dig. gtt. xxx. t. i. d. February 23d: Statu quo; dig. reduced to gtt. xx. t. i. d. February 27th: Pulse, 78, much feebler; is a good deal better, but still complains of dyspnœa; dig. stopped; convallaria, gtt. xv. t. i. d. March 2d: Same; convallaria, gtt. xxv. t. i. d. March 5th: Less dyspnœa and palpitation than at any time since entrance; convallaria, gtt. xxxv. t. i. d. March 7th: Improvement marked; his heart gives the man but little trouble. Transferred to convalescent help.

Case X.—Charles N——, aged sixty-five; Bright's disease; œdema of feet and legs; nausea, vomiting; moderate dyspnœa; considerable cough; cardiac signs negative; lungs, emphysema and chronic bronchitis; urine, average daily amount twelve to twenty-five ounces; moderate amount of albumen, hyaline and granular casts. January 18th: Urine, twenty-one ounces; elimination by skin and bowels with slight result. January 22d: Getting steadily worse; urine, twelve ounces. January 23d: Pulse, very rapid and irregular; convallaria, gtt. xv. t. i. d. January 24th: Pulse is uncountable at wrist; urine, fourteen ounces; œdema very painful, punctured and bandaged; convallaria, gtt. xxx. t. i. d.; heart-beat, 108. January 26th: Urine, seventeen ounces; somewhat easier; pulse, 100. Patient died January 27th.

Case XI.—Lizzie H——, aged twenty-eight; phthisis, second stage; much enfeebled by successive hæmoptyses. February 23d: Pulse, 96, very small indeed; convallaria, gtt. x. t. i. d. February 25th: Pulse, 118, somewhat stronger; convallaria, gtt. xv. t. i. d. February 28th: Rapidly improving; pulse, 96, still feeble; convallaria, gtt. xxx. t. i. d. March 3d; General condition satisfactory; pulse considerably stronger, 102. March 10th: No further results. Patient discharged at request.

Case XII.—Constantine Z——, aged thirty-two; acute articular rheumatism; no pericardiac or cardiac lesion; convalescence; pulse almost imperceptible, and varying for days between 114 and 160; temperature normal. Digitalis and ordinary cardiac tonics tried—no result. January 15th: Pulse, 130; temperature and respiration normal; convallaria, gtt. v. t. i. d. January 16th: Pulse, 140. January 17th: Pulse, 156; convallaria, gtt. x. t. i. d. January 18th: Pulse, 140, very feeble; convallaria, gtt. xv. t. i. d. January 19th: Pulse, 120, somewhat stronger; convallaria, gtt. xxv. t. i. d. January 20th: Pulse, 102; undoubtedly better and stronger. January 22d: Pulse, 90, regular and full; convallaria, gtt. xxx. t. i. d. January 23d: Pulse, 78, good. January 25th: Pulse, 80. January 26: Pulse, 108, and slightly weaker; convallaria, gtt. xl. t. i. d. January 27th: Pulse, 80, fair; convallaria, 3 i. t. i. d. January 30th: Pulse, 102, regular and good. February 1st: Pulse, 80. Discharged.

Case XIII.—Henry H——, aged thirty-eight; melancholia; excessive feebleness of heart-beat; no physical lesion or symptom; pulse, 96–108. January 23d: Convallaria, gtt. xv. t. i. d. January 25th: Pulse, 80, much fuller and stronger; convallaria, gtt. xx. t. i. d. January 30th: Pulse, 90, excellent; convallaria, gtt. xxx. t. i. d. February 2d: Pulse, 84, full and strong; no other effect.

Case XIV.—John R——, aged fifty; acute alcoholism; very shaky; pulse, 77, exceedingly feeble, almost imperceptible at the wrist; first sound of heart hardly audible with a stethoscope. January 23d: Convallaria, gtt. xx. t. i. d. January 25th: Pulse, 72, same; convallaria, gtt. xxx. t. i. d. January 26th: Pulse, 80, slightly better; convallaria, gtt. xl. t. i. d. January 27th: Pulse, 60, not improved at all to day; convallaria, 3 i. t. i. d. January 30th: Pulse, 60, very feeble indeed; convallaria stopped.

Case XV.—James S——, aged forty-eight; phthisis, third stage; very serious hæmoptysis; pulse, 66, very feeble, hardly perceptible at the wrist. January 15th: Temperature, 98½°; respiration, 30; convallaria, gtt. x. t. i. d. January 17th: Pulse, 80, improving; feels stronger; no more blood in sputum. January 19th: Pulse, 96, much stronger. January 22d: Patient had another severe hemorrhage; pulse, 66, very feeble. January 23d: Pulse, 72, almost imperceptible; convallaria, gtt. xx. t. i. d. January 24th: Pulse, 70; respiration, 24; temperature, 99°; pulse still very feeble; convallaria, gtt. xxxv. t. i. d. January 26th: Some improvement; convallaria stopped and other treatment resorted to.

And now a brief résumé of results: There were nine cases of organic heart disease, in most of which considerable hypertrophy had already occurred, or dilatation had even taken place. In six of these cases a moderate effect was obtained from the remedy; in three there was no result. In none of the cases in which irregularity or intermittency of the pulse was marked did convallaria affect the heart-rhythm. It has been claimed that convallaria is more adapted for cases of functional than for cases of organic heart disease; but the amount of relief which some of the above cases obtained was very considerable, and I cannot but look upon the drug as an occasionally valuable agent even in the most advanced forms of cardiac disease. The results obtained in the remaining six cases were not much better than those from the first nine. Five of these cases were cases of cardiac failure from acute disease, from hemorrhage, or from depraved general conditions. Of these five, one only was not benefited at all; and in several cases the results were very satisfactory.

I found it necessary, however, in most cases, to give

doses considerably in excess of the ordinary ones. Several cases took 3 i. of the fluid extract t. i. d. without bad effect; one case, No. VIII., took 3 ij. t. i. d., and was nauseated by it; but the patient had been suffering from chronic gastro-catarrh before, and it is possibly unfair to attribute her vomiting to the drug alone.

One word as regards the diuretic effects of convallaria. I am sorry that I did not have the urine measured in all the cases from day to day. In the only case in which that was done, No. X.—one of advanced disease of the kidneys—the amount of urine was not increased, and the dropsy was not affected. But there was certainly no very marked diuresis caused by the drug in any case, for it would surely have been brought to my notice.

2. *Manaca.*—Twelve cases were treated with this drug—all cases of chronic rheumatism. In the cases which were benefited the heat and swelling rapidly disappeared from the joints; the pain on motion of the limb and consequent disability soon became better. In almost all cases I began with the usually prescribed dose—five, ten, fifteen drops—but was obliged to increase it to two drachms, or half an ounce, before any decided effect was observed. The preparation used was the fluid extract prepared by Parke, Davis & Co.

Case I.—Chronic rheumatism. Dose, 3 i. to 3 ij. t. i. d. Began to improve on fourth day; under treatment one month; recovered completely.

Case II.—Chronic rheumatism. Dose, 3 ss. t. i. d. Began to improve on sixth day; under treatment thirteen days.

Case III.—Chronic rheumatism. Dose, 3 i. t. i. d. No result; under treatment nine days.

Case IV.—Chronic rheumatism. Dose, 3 i. t. i. d. No result; under treatment sixteen days.

Case V.—Chronic rheumatism. Dose, 3 ij. t. i. d. Began to improve in three days; good result; whole time of treatment eleven days.

Case VI.—Chronic rheumatism. Dose, ℥ ss. t. i. d. No result; under treatment ten days.

Case VII.—Chronic rheumatism. Dose, 3 ij. every four hours. No improvement at all; under treatment five days.

Case VIII.—Chronic rheumatism. Dose, 3 ij. t. i. d. Improvement began in five days; good results; time of treatment fourteen days.

Case IX.—Chronic rheumatism. Dose, ℥ ss. t. i. d. Began to improve in three days; good result; time of treatment eight days.

Case X.—Chronic rheumatism. Dose, 3 ij. t. i. d. Joints began to get better in five days; time of treatment twenty-four days; very good result.

Case XI.—Chronic rheumatism. Dose, 3 ij. t. i. d. Improvement began in two days; excellent result; time of treatment eighteen days.

Case XII.—Chronic rheumatism. Dose, 3 ij. to ℥ ss. t. i. d. Improvement began on third day and continued to a certain extent, and then stopped.

Of the twelve cases of chronic rheumatism, seven received very marked benefit from the drug; one was moderately relieved, and in four cases no effect at all was perceived. I regard the drug as certainly worth a trial, at least in these very common and often very troublesome cases.

3. *Eucalyptol.*—My attention was drawn to the use of eucalyptol in cases of phthisis, chronic bronchitis, etc., by a writer in the *Berl. Klin. Wochenschrf.* of last year, who recommended it both internally and by inhalation in these cases. Fifteen cases in all were observed; Merck's preparation of the drug was used. It was claimed that it lessened the cough and expectoration, diminished fetor, etc.

Case I.—Phthisis, third stage. Dose, gtt. x. t. i. d., and inhaled. Relief began on second day, and continued sixteen days, as long as drug was continued.

Case II.—Phthisis, second stage. Dose, gtt. v. t. i. d. No effect at all; took eucalyptol seven days.

Case III.—Phthisis, second stage. Dose, gtt. v. t. i. d. Improvement began on second day, and continued until her discharge—six weeks.

Case IV.—Phthisis, third stage. Dose, gtt. v.–xv. t. i. d. Relief began in five days, and continued to a moderate degree during the two weeks of treatment.

Case V.—Phthisis, second stage. Dose, gtt. v. t. i. d. Relief began on third day, and continued till she was transferred, three weeks later.

Case VI.—Phthisis, third stage. Dose, gtt. v.–x. t. i. d. No result at all. Took eucalyptol seventeen days.

Case VII.—Asthma and chronic bronchitis. Dose, gtt. v.–x. t. i. d. Relief began in two days, and continued during time of treatment—one week.

Case VIII.—Phthisis, second stage. Dose, gtt. x. t. i. d. Relief in two days; continued for two weeks.

Case IX.—Phthisis, third stage. Dose, gtt. x.–xxx. t. i. d. No result. Took eucalyptol for ten days.

Case X.—Phthisis, third stage. Dose, gtt. x.–xxx. t. i. d. No improvement at all. Took eucalyptol two weeks.

Case XI.—Phthisis, third stage. Dose, gtt. v.–xx. t. i. d. No effect till he had taken drug a week; then began to improve, and continued doing so during remaining time—two weeks.

Case XII.—Phthisis, third stage. Dose, gtt. v.–xx. t. i. d. Began to improve in three days, but drug soon lost all effect.

Case XIII.—Phthisis, second stage. Dose, gtt. v.–xx. t. i. d. Began to be relieved by second day; continued so for two weeks, and then drug lost its effect.

Case XIV.—Phthisis, second stage. Dose, gtt. x. t. i. d. No result. Took drug for ten days.

Case XV.—Phthisis, third stage. Dose, gtt. v.–xxx. t. i. d. No result from eucalyptol. Treated two weeks.

Fifteen cases, then, in only four of which the patient was distinctly benefited. Four cases were relieved to a small extent, and seven cases were not affected at all. Still the cases that did well under it obtained marked relief. It seems to be of most use in cases with very abundant muco-purulent expectoration.

The inhalation of the vapor from a respirator containing a sponge upon which a few drops of eucalyptol can be poured is undoubtedly a valuable method of administration of the drug.

4. *Yerba Santa.*—A large number of cases were treated with this drug, which has been much vaunted as a stimulating expectorant. There were 41 cases observed in all, 30 of them cases of phthisis, second and third stages, and the rest bronchitis with asthma and emphysema, Bright's disease, etc. I cannot say that the results have been in any way encouraging. In only 9 cases was any real benefit observed; in 11 a moderate amount of relief was obtained; 21 cases were not affected at all. Nay, more than that, in a very large number of cases—17 in all—gastric derangement, nausea, and vomiting were caused by the drug. I cannot, therefore, look upon yerba santa as a very important addition to our list of expectorants.

5. *Chekau.*—This drug belongs to about the same class as the one last considered, and can hardly be looked upon as of much more value. Twenty-one cases were treated with it, most of them cases of chronic cough from phthisis, bronchitis, etc. In only 8 cases was marked relief in the cough and expectoration afforded by the drug; in 2 or 3 a slight effect was noted; in the remaining 11 cases there was no result at all. In 3 cases the medicine disagreed, caused nausea and vomiting, and had to be stopped. The fluid extract was the preparation used, and the dose one drachm to half an ounce t. i. d. Here, then, is a result which is hardly more encouraging than that obtained with yerba santa.

6. *Oleum Gaultheriæ.*—This drug was carefully tried in four cases of severe subacute rheumatism with moderate success. The doses used varied from five to ten drops three or four times a day, and no other treatment what-

soever was employed. In all four cases much relief was obtained from the drug; in all of them the swelling, the pain, and the local heat soon diminished, and the patients were shortly convalescent; but in every case, also, a certain amount of disability was left which the drug did not relieve, and for which recourse had to be had to frictions, massage, etc.

7. *Lippia Mexicana.*—Twelve cases were treated with this expectorant, of which the fluid extract was given in half-drachm to half-ounce doses t. i. d. A somewhat better result was obtained than was done with the other two expectorants tried. In seven cases out of the twelve the harassing cough was markedly relieved, enabling patients to obtain a comfortable night's rest who had previously been able to get it only by a free use of narcotics. Five cases were not affected at all; but in no case was there seen the disagreeable gastric disturbances caused both by yerba santa and chekau. I look upon it, therefore, as a remedy of some value for the relief of an often very distressing symptom.

8. *Quebracho.*—Excellent results were obtained with the fluid extract of this drug. Nine cases were observed, and in all of them save one great relief was obtained from the dyspnœa. The cases comprised ones of asthma, valvular cardiac disease, Bright's disease, chronic bronchitis, and phthisis, and in all but one case of phthisis respiration became easier, the blueness disappeared from the finger-ends and the prolabia, and the patient's general condition became very much better. The doses used were half a drachm to two drachms t. i. d.

A CONTRIBUTION IN FAVOR OF COTTAGE HOSPITALS—REPORT OF TWO INTERESTING SURGICAL CASES.

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THE essay on "Cottage Hospitals," published by Dr. Burdett, excited so much interest in this country, and these enterprises or charities were so highly advocated generally by our medical press, that the following short statistical report of the one of which the writer has charge may prove of interest to the profession, and is given for what it may be worth.

St. Luke's Hospital, situated in South Bethlehem, was opened in 1873. The first year 69 patients were treated. Last year, 1881–82, 692 patients received treatment. Beginning in an ordinary two-story brick cottage, it is now grown to the dimensions of a brick pavilion (opened only last year), built upon the most approved modern pavilion hospital plan, and possessing every convenience of a metropolitan hospital, also two wooden buildings after the ordinary country style of architecture, having an aggregate capacity of forty beds. The pavilion has two wards, of twelve beds each, and is used for acute surgical cases; one wooden building, having a capacity of eight beds, for women's diseases; and the other wooden building, with eight beds, for isolation. Since the opening of the pavilion, from November 21, 1881, to November 21, 1882, there have been 43[1] major operations performed, with 2 *deaths*, or 4.8 per cent. The operations were, 20 major operations, with 2 deaths; 9 major exsections, with no death. The remaining 14 were miscellaneous, and no fatal result.

The amputations were as follows: 1 at wrist-joint, recovered; 2 of forearm, both recovered; 3 of arm, all recovered; 8 of leg, 1 death; 2 at knee-joint, both recovered; 3 of thigh, 1 death; 1 at hip-joint, recovered. Total, 20 cases, 2 deaths.

The death after amputation of the leg was from delirium tremens on the tenth day; that after amputation of the thigh, from septicæmia. The amputation was done for compound comminuted fracture of the leg after a prolonged attempt had been made to save the limb. The patient was already suffering from septicæmia when operated upon. He never rallied from the condition, and died about twelve days after the amputation.

The resections were: 2 of tarsus, 2 of tibia, 1 of knee-joint, 2 of femur, 1 of hip-joint,[1] 1 of ribs (for empyæma); all recovered. Total, 9 cases, 9 recoveries.

Of the amputations 2 were done for diseased conditions. The hip-joint amputations; 18 were after injuries. Of these, 15 were primary or immediate, and 3 were secondary or intermediate (done during active inflammation and suppuration). With scarcely a single exception, in every case of amputation from injury, there had been excessive hemorrhage before the patient arrived at the hospital.

Except the resection of the knee-joint all of the exsections were for diseased joints and bones. In all these cases the modified Lister dressing was employed, that is to say, thorough cleansing of the limb at the seat of operation, disinfection of the skin and wound—if there was one—with five per cent. solution of carbolic acid; hands of operators and assistants disinfected with the same solution, as were the sponges, instruments, etc., used during the operation. Afterward a full Lister dressing was applied, and removed only when soiled or the temperature of the patient rose. In the whole series of cases there was not a single case of gangrene, nor of osteomyelitis, nor phlebitis, nor erysipelas. Not a single case of secondary hemorrhage. The average time in the hospital was 28.3 days.

Among the operations there are two which appear to be of sufficient interest to publish.

CASE I.—George R——, nine years of age, admitted February 6th. Five months before admission the patient was struck by a locomotive, and besides severe internal injuries, sustained a fracture of the left femur in the upper one-third of the shaft. In a written statement of his treatment after the fracture, his physician said he had tried first extension and counter-extension, and then a plaster-splint, without being able in either case to retain the fragments in proper apposition. He sent him to the hospital to be treated for *ununited* (?) *fracture of the femur*. On admission the patient was a bright, sturdy little fellow, well grown for his age, well nourished, and best family history. He used crutches, and carried the lower extremity in a limp, helpless manner. Toes inverted, pointing toward the dorsum of the right foot. He could, by leaning far over, bring the sole of the foot to the ground, but could not bear any weight on the foot without pain. Examination of the affected limb showed an enormous projection in the upper femoral region, on its external aspect—hard, resisting, not movable, not separable, and no crepitus; acetabular motion perfect, extremity moved as a whole; two and a half inches shortening. Nélaton's line showed the trochanter major slightly higher than normal, and it also projected externally more than normal. It was evident the fracture had united, but in a very bad position.

The parents of the child readily consented to an operation. A short time after his admission this was accordingly undertaken. A curved incision was made over the projection, beginning just below the greater trochanter and extending about three and a half inches downward in the longitudinal axis of the limb. Convexity of incision downward. The incision was carried through the periosteum, which was carefully stripped off, and the bone cleared, when the exact state of the deformity was manifest. The fracture had been about one and a half inch below the trochanter minor; the upper fragment

[1] There were actually 53 major operations, but as 10 of these (*amputations*) were done on cases in absolutely hopeless conditions, merely to render the few hours the patient might possibly live as bearable as possible, they are not counted in the above enumeration. Reckoning these, there would be 53 major operations, with 8 deaths (3 of the hopeless cases had each two limbs torn off, requiring simultaneous amputations), making 15.12 per cent.

[1] This case afterward required amputation of the thigh. The operation (exsection) was done several days after the injury, which was crushing of the condyles of the femur and disintegration of the knee-joint; performed because the patient refused amputation. The soft tissues of the lower third of thigh had been so badly injured that he was obliged to have the amputation afterward.

was rotated inward and drawn slightly upward by the iliacus and psoas muscles; the lower fragment was drawn upward and outward by the muscles of the thigh, and they were allowed to unite in this position, the apposition being the lower outer side of the upper and the inner edge of the lower fragment. The union was so firm that it was necessary to use a saw to separate the fragments. A wedge-shaped piece was removed from the knuckle-like projection of bone, firm manual extension was employed to draw the lower fragment into place, which was readily effected. It was with the greatest difficulty that the upper fragment could be reduced, and almost impossible to retain it in place. Good apposition was finally obtained, however, and by means of two double bands of thick silver wire passed through two holes drilled obliquely through the end of either fragment they were retained in apposition. The incision was brought together, large drainage-tube introduced, and Lister dressing applied, after the usual five per cent. ac. carbol. solution syringing. While the patient was still under the anæsthetic, a plaster-of-Paris splint was applied to the whole extremity, with iron brackets over the wound. For a number of days the little patient suffered agonies from spasm of the femoral muscles. This gradually ceased, however, and he made a slow but complete recovery. He was discharged from the hospital with no deformity, one inch shortening, and walking well with assistance of a slightly elevated shoe. I have recently received a letter from his father saying he walks about three miles a day to and from school, has discarded his raised shoe, and knows no difference between his two limbs.

Case II.—Albert B——, aged thirteen. Phthisical mother. "Hip-joint disease" for five years. Was seen first about one year before the last admission, at which time he entered the hospital, and exsection of head of femur was performed. He improved very much after this, but after three months the upper end of the shaft of the femur had to be exsected. The sinuses still persisting after the operation, he was re-admitted into the hospital October 13, 1882. After a consultation it was decided to amputate at the hip-joint. The boy was quite anæmic, and the urine had already a small amount of albumen in it. The liver and spleen were enlarged; heart and lungs normal. It was particularly desirable in this case to avoid much loss of blood, and knowing that one of the principal bugbears of amputation at the hip-joint is hemorrhage, I was at a loss at first how to prevent it. I finally hit upon an expedient which acted admirably. I have noticed that in applying Esmarch's bandage and retentive band for operations high up on the thigh, the reason why the band did not prevent the blood from flowing back into the limb was that the point of resistance opposite to it, when it should constrict, was a resilient one, and the pull of the band was in a measure counteracted by the elasticity of the tissues of the opposite side. So I reasoned if a firm non-resilient substance be interposed between the band and the opposite side, the whole force of the elastic constriction will be exerted on the limb to be operated upon.

On October 17th the operation was performed. As soon as the patient was anæsthetized I applied a *long Lister splint to the sound limb and side*, put on Esmarch's bandage as usual, the retentive band being applied tightly in a figure of 8 around the groin, just below the anterior superior spine of ilium, over the opposite side, and so return; in short, just as ordinarily done for high operations. I then had the patient drawn down until his buttocks were on the edge of the foot of the table, laid the end of the splint attached to the good limb and side on a high stool, and the patient was firmly and evenly supported, *while not a drop of arterial blood was lost during the operation.* The flaps were formed after the Guthrie manner. Though it was necessary to cut almost under the retentive band, it held on firmly, and did its work faithfully to the last. Besides the removal of the entire limb, the whole acetabular rim and part of the ramus of the pubis had to be removed. So tedious was this part of the operation that the patient's strength began to flag, and I was obliged to stop the operation before all the dead bone was removed from the pelvis. The lower and inner parts of the flaps were nicely apposed, a large-sized drainage-tube introduced, and, except a space left open on the external aspect, flaps brought together throughout whole extent.

Boy's highest temperature was on the fifth day, and was only 101° F., produced, perhaps, by eating too much solid food. Notwithstanding a large amount of cicatricial tissue, the flaps united rapidly and well; in two weeks, except where the drainage-tube had been, and two or three openings of old sinuses, the wound was healed. He was out of bed in two weeks. Three days later he was walking about the wards. His general condition was much improved at once. Except two or three sinuses, through which the dead bone left near the acetabulum is making its way in bits to the outer world, he has a well-healed stump, and feels perfectly well.

Progress of Medical Science.

A Method of Hastening the Anæsthetic Action of the Ether Spray.—The ether spray is employed frequently at the Hôpital St. Louis in Paris for the production of local anæsthesia. A little procedure, first indicated by Dr. Letamendi, of Barcelona, but not hitherto utilized in practice, is employed by Dr. Vidal to shorten the duration of the process of congelation. It consists in making a slight prick with a needle at the point upon which the spray is directed, at the moment when the skin assumes a purplish hue, and when the ether commencing to solidify assumes an oily consistency. The little puncture made at this time excites a reflex constrictive action of the vaso-motor nerves, the blood is driven from the part, and the skin becomes white. Another method of hastening the process consists in placing little wads of lint about the part, thus increasing the surface of evaporation.—*Revue Médicale*, June 30, 1883.

Tuberculosis from Contagion.—Dr. J. Lindmann relates, in the *Deutsche Medicinische Wochenschrift* of July 25, 1883, two cases of tubercular ulceration following circumcision. In the first case, in which there was a family history of phthisis, the ulceration healed only after a long time, and was followed by caseous adenitis. Then Pott's disease of the spine was developed, accompanied with symptoms of myelitis, and finally the child died from acute pulmonary phthisis. In the second case, there was no hereditary history of disease. This child, after suffering from enlarged glands and an osteitis of the wrist-joint, finally recovered and remains in good health at the present time. The ulcerations in both cases presented all the characteristics of tubercular ulcers. The children were circumcised according to the orthodox ritual of the Hebrews, in which the circumciser, after cutting off the prepuce and tearing the mucous layer with his nail, takes a swallow of wine and sucks the bleeding parts. The operator in these cases belonged to a family almost all of whose members suffered from phthisis. He himself had been ill for some years, and died from tuberculosis shortly after performing circumcision in these two cases. Dr. Lindmann regards the disease in the related instances as undoubtedly arising by contagion from the phthisical operator.

The Therapeutical Value of Arbutin.—Although arbutin is no recently discovered substance, it is only of late that it has been proposed to the medical profession as a remedy of value in the treatment of diseases of the genito-urinary organs. This is probably due to the fact that the earliest experiments were made upon the healthy organism, and were not unnaturally negative in their re-

sults. More recent investigations into the action of this glucoside in disease would seem to indicate that we have here a remedy of no inconsiderable importance, and one which may be advantageously substituted for the bulky infusion of uva ursi. In a notice of this substance in the *Centralblatt für Klinische Medicin* of July 7, 1883, Dr. H. Menche states that he has found it in many cases to be a most efficient diuretic. It is given for this purpose in doses of about twelve grains per diem, but may be administered in much larger quantities without producing any unpleasant effects. In catarrh of the urethra or bladder, larger doses are advised (forty-five to sixty grains a day). It is excreted in part as hydrochinon, and since injections of a one or two per cent. solution of this latter substance are said by Brieger to be most efficacious in the cure of gonorrhœa, the author suggests that we might in this way avoid the use of the syringe, the topical remedy being contained in the urine. Arbutin exists in the form of fine white, needle-shaped crystals, unchanged by exposure to the air. It is readily soluble in water, has a slightly bitter taste, and no odor. The easiest mode of administration is in the form of powder, which may be dissolved in a tablespoonful of water. It is somewhat expensive, the present price in Germany being in the neighborhood of three dollars per ounce.

The Changes Occasioned in the Adipose Tissues by Inflammation.—From a number of experiments made upon dogs, Dr. Sklifosowsky formulates the following conclusions: 1. In acute inflammation of the subcutaneous adipose tissue the changes in the fat-cells consist in a shrinking and subsequent disappearance of the investing membrane; the fat drops are absorbed and their place supplied by serous cavities. 2. Similar changes also take place in acute inflammation of other parts, as the pericardium, omentum, etc. 3. In chronic inflammatory processes, the retrograde changes of the fat-cells are expressed by hypertrophy and division of the nuclei, and through swelling and subsequent segmentation of the protoplasm. 4. The fat is absorbed through the lymphatic vessels, but whether absorption occurs also through the walls of the blood-vessels is doubtful. 5. In limited inflammation of the subcutaneous connective tissue, no functional disturbance on the part of the heart or lungs was caused by fatty embolism of the blood or lymphatic vessels.—*Centralblatt für Chirurgie*, July 14, 1883.

Pneumonia without Fever.—Although in aged or cachectic individuals it is not very uncommon to see a pneumonia run its course without any noteworthy elevation of temperature, such an occurrence under other conditions is rare. Dr. Mazzotti reports a case of this kind in a robust and well-nourished porter, sixty-three years of age. The patient was suddenly seized with sharp pain in the side, cough, and bloody expectoration. Physical examination revealed the presence of a croupous pneumonia involving the left lower lobe. During the entire course of the disease, which terminated favorably, the temperature never exceeded 99.5°, and reached this height but once, being normal the rest of the time. A similar case has been recorded by Korányi.—*Centralbl. für Klin. Medicin.*, July 14, 1883.

Primary Tubercular Arthritis.—Dr. Arnaud concludes an article of some length in the July number of the *Revue de Chirurgie*, as follows: 1. Tuberculosis of the synovial membranes may be primary and independent of any osseous lesion, or secondary to the development of tubercles in the epiphyses. 2. Primary tuberculosis manifests itself in the synoviæ under the two anatomical forms of ordinary gray granulation and of elementary microscopic tubercle. The latter always accompanies the granular form, but may exist independently of any tubercular lesion visible to the naked eye. 3. Synovial tuberculosis has been chiefly studied in fungoid growths, but it can be detected also where no fungoid changes are present, as in fistulous tracts, or wherever the neoplasm may be developed by inoculation. 4. The tuberculous nature of a chronic arthritis may easily escape detection unless the naked eye examination be controlled by the aid of the microscope. It would be well always to make a thorough anatomical and histological examination in every case of arthritis, in order to determine the comparative frequency of the tubercular affection. 5. Finally, the author expresses his conviction that a certain number of cases of white swelling and chronic arthritis, fungoid or otherwise, hitherto attributed to scrofula, rheumatism, or unknown causes, will be found upon more careful examination to be tuberculous in their nature.

Trephining for the Relief of Traumatic Epilepsy.—The following case was related to the Surgical Society of Paris by M. Demons, of Bordeaux (*Revue de Chirurgie*, July 10, 1883). A man had fallen two years before, striking his head. He was unconscious for three days, there was an ecchymosis of the scalp, he stated, on the right side, and a paralysis of the left arm and right leg was present for some four or five months. From that time until shortly before coming under observation, he was perfectly well, except for occasional headaches. He was then suddenly seized with repeated attacks of epilepsy, recurring every fifteen minutes, with left facial paralysis, and subsequently with hemiplegia of the same side. The epileptic attacks becoming more frequent and of greater violence, and the intellect becoming clouded, M. Demons decided to trephine. After some hesitation regarding the seat of injury, the trephine was applied to the right side over the fissure of Rolando. As the operation proceeded a crack was seen in the skull, and in the arachnoid was found a little cyst the size of a pea. This was removed, and the surface of the brain was scraped where it seemed to have undergone some alterations. A Lister dressing was applied, and the wound healed readily. The epilepsy and hemiplegia disappeared at once, and had not returned at the time of the report, a month after the operation.

Abscess of the Posterior Spinal Region in the New-Born.—Dr. Guéniot relates two cases of abscess in the vertebral region (one in the neck and one in the back) in children of two and four weeks of age respectively (*Centralblatt für Chirurgie*, July 21, 1883). A diagnosis was made by himself and several other surgeons of spina bifida. The location of the abscess exactly in the median line, its slight change in size upon crying, and the absence of redness or œdema of the skin gave occasion to the error. The mistake was discovered only after an exploratory puncture. The author states in this connection that abscesses may form in young children in any situation. The slight increase of volume in crying is owing to a fulness of the veins caused thereby. The absence of the ordinary œdematous swelling of the skin covering deep abscesses is not uncommon in infants. This fact he explains by the late development of the superficial venous plexus.

Treatment of Malignant Pustule by Injections of Iodine.—Dr. Richet relates two cases of malignant pustule treated by injections of tincture of iodine. One died in forty-eight hours, while the other recovered after eight injections of the tincture diluted with two parts of water. In both cases inoculations of animals with pus from the pustules were followed by fatal results. Inoculations with the blood of the first patient were also fatal, while the blood of the second caused no infection. The author concludes from these cases that when the infection is general, when the blood contains the specific bacilli, local treatment is useless. But, on the other hand, if injections at the periphery of the pustule are made before the disease has spread from its point of origin, a cure may be obtained.—*Centralblatt für Chirurgie*, July 21, 1883.

Surgical Treatment of Dupuytren's Contraction.—In a brochure on Dupuytren's contraction of the palmar fascia and its treatment, Dr. Chevrot describes a method pursued by Busch in the correction of this deformity. A triangular tongue of skin is dissected up from the palm, the base of the triangle resting in the crease which separates the contracted finger from the hollow of the hand, and the apex terminating at the point of greatest prominence when the finger is forcibly extended. The base of the triangle is left attached while the rest of the flap is dissected up, as much of the connective tissue as possible being raised with the skin. All the contracted bands of the aponeurosis are divided, until complete extension of the finger is obtained. The flap of skin retracts, leaving a triangular space in the palm uncovered. The edges are approximated as far as possible, and a compress applied. A retentive splint should be applied and maintained until the cure is completed. If this method is pursued the danger of wounding the sheaths of the tendons is reduced to a minimum.—*Bulletin Général de Thérapeutique*, July 15, 1883.

The Permanent Bath in the Treatment of Surgical Diseases.—In cases after operation in which the ordinary antiseptic dressings cannot be conveniently applied, owing to the location or other conditions of the wound, Dr. Sonnenburg advises a return to the permanent bath. He has met with considerable success by this treatment after operations upon the urethra, rectum, or uterus, or in lithotomy. In the after-treatment of amputations or resections he has found it also useful. The addition of antiseptic substances to the water of the bath, he considers to be unnecessary.—*Centralblatt für Gynäkologie*, July 21, 1883.

Ether in the Treatment of Sore Throat.—Professor Contalo employs an ether spray in the treatment of pharyngitis. The applications are made several times a day, according to the gravity of the case. Under their influence, it is claimed, the temperature falls, the vessels contract, and the local condition is speedily improved. In two cases a fibrinous exudation was detached and not reproduced. Ether, according to the author, deserves a trial in pharyngeal diphtheria, not only as an antiseptic agent, but also because the pain is thereby greatly diminished, and the taking of nourishment facilitated. Two cases of pseudo-membranous pharyngitis were successfully treated by this method. He insists especially upon the rapid lowering of temperature following the applications of ether spray.—*Journal de Médecine de Paris*, June 16, 1883.

Adenoid Growths in the Pharynx.—The following are the conclusions arrived at by Dr. Pesson in a thesis presented to the Faculté de Médecine of Paris (*Journal de Médecine de Paris*, June 16, 1883). 1. In the upper part of the pharynx, at the junction of the vault and the posterior wall, and between the orifices of the Eustachian tubes, there is an agglomeration of closed follicles which constitute (adopting the expression of Kölliker and Luschka) a true tonsil. 2. This gland is liable to hypertrophy like the tonsils, and then presents the appearance of a cluster of vegetations. These vegetations, already described by a number of writers, are seen usually during the first twenty years of life. Like the lymphatic tissue in general, their natural tendency is to atrophy. 3. These adenoid growths give rise to various troubles of respiration, phonation, and hearing. Children who suffer from their presence, breathe through the mouth and acquire thereby a stupid expression; they complain of frequent headaches, snore during sleep, and are sometimes awakened in the night by asthmatic attacks. The tone of the voice is muffled and faint, and the articulation of nasal words (in French) is difficult. Hearing is often impaired through middle ear disease. These troubles, which often discourage the physician by their obstinacy, disappear spontaneously upon the removal of the third tonsil. At the same time the deformity of the thorax, described by Lambon and Robert, and attributed by them to hypertrophy of the tonsils, is observed. A careful study of the facts leads to the belief that this symptom is really due to the adenoid vegetations in the pharynx. 4. These growths often determine a chronic catarrh in this region, which is too often referred to a diathesis, but which, like all the other symptoms, can only be cured by treatment directed to the vegetations. 5. Observation leads also to the opinion that deaf-mutism depends in certain cases upon the presence of these adenoid vegetations. Consequently, an opportune diagnosis may lead to the prevention or even cure of deaf-mutism from such cause. 6. Hypertrophy of the third tonsil may be diagnosed by posterior rhinoscopy or by digital examination. 7. The treatment of these vegetations and of the symptoms dependent upon them consists essentially in the extirpation of the enlarged gland.

Myxœdema and Beriberi.—Dr. Basil Féris regards beriberi and myxœdema as identical, each being characterized by a more or less general anasarca, together with disturbed function of the nervous system. The exciting causes are the same in each disease, namely, humidity and rapid changes of temperature. He proposes as a common designation the term neuro-vascular hydroparesis, or more simply hydroparesis.—*Revue Médicale*, July 21, 1883.

Treatment of Suppurative Phlebitis.—Dr. Demons related the following case to the Bordeaux Medical Society, as showing the curability of suppurative phlebitis if energetically treated (*Revue Médicale*, July 21, 1883). A man cut the veins of his neck with a razor. A suppurative phlebitis followed, and symptoms of pyæmia declared themselves. In the presence of such an otherwise hopeless condition, Dr. Demons determined to slit up the veins, which he found full of pus. He scraped them and cauterized the lining membrane with a ten per cent. solution of chloride of zinc. An antiseptic dressing was then applied, and the patient recovered. Since then the author has learned that veterinary surgeons sometimes excise the jugular vein in similar conditions, and he thinks that such an operation might be preferable to the one performed by him in the case reported.

Epistaxis Arrested by Hot-Water Douche.—Dr. J. H. Stuart, of Minneapolis, sends us a report of the following case: "On July 14th last I was called to see a laboring man, about thirty years of age, who had been bleeding at the nose for nearly twenty-four hours. The epistaxis seemed to have been caused by sitting in a draught of air, in the evening, with a portion of his clothing left off, which produced a stuffiness in the nares. Various remedies had been used, but with no relief, and the loss of blood was sufficient to produce a very perceptible impression on his pulse, accompanied by a feeling of faintness. Having determined to try the value of hot water I took with me apparatus for douching the nose, and having procured a pitcher of warm water (not as hot as I desired) I passed it in a continuous stream through the nares. The hemorrhage seemed to be checked for a while at least, but soon the bleeding side was filled by a clot, and again it showed itself both posteriorly and anteriorly. I procured another pitcher of water as hot as I thought could be borne and douched the nose as before. I continued the douche until the water escaping was almost free from any stain of blood—using perhaps a gallon. After this there was no bleeding, not even the formation of a clot in the nostril; but the patient, breathing freely through both sides, went to bed about 10 P.M. and slept till morning without any return of hemorrhage whatever. It is true I endeavored after each douching to throw a solution of tannin into the posterior nares, but I attributed little or no benefit to this procedure."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 8, 1883.

THE PATHOLOGY AND TREATMENT OF METRIA, OR SO-CALLED PUERPERAL FEVER.

METRIA, the gynecological, and, in this instance, proper name for the so-called puerperal fever, has recently been the subject of three very instructive, as well as interesting papers, read before the British Medical Association.

There is scarcely a question but that the term metria should be substituted for "puerperal fever." Dr. Thorburn justly remarks that "puerperal fever" does not cover the ground, for it is almost impossible to include epidemic puerperal fever under the same classification as the more sporadic forms; and again, the use of the term precludes the inclusion of cases of metria caused by zymotic diseases. Regarding this he says, as is well known, that the poisons of scarlatina, erysipelas, or typhoid fever may sometimes cause in puerpera symptoms scarcely distinguishable from those of puerperal fever; yet Mathews Duncan and his followers, who wish to make puerperal fever a disease *sui generis*, do not include zymosis with septicæmia or in their list of etiological factors. Again, a puerpera who has scarlatina which can be distinctly diagnosed, has scarlatina; but a woman who has sudden rigors, intense tympanites, high temperature, and rapid death, with subsequent clear proof of scarlatinal infection —with perhaps the occurrence of the typical rash in the hour of death—has puerperal fever or metria caused by scarlatina. Zymotic diseases may occur in puerperal women without causing puerperal symptoms, and should be then designated by their proper names; but when, with that zymotic affection, puerperal symptoms manifest themselves, shall we confine our nomenclature to one or to a combination of the two? Clearly the latter, and metria is then the proper designation.

Precisely the same causes are at work whether scarlatina or erysipelas be sporadic or epidemic, and may in the latter case produce a severe and fatal epidemic analogous to what occasionally occurs in hospital, more rarely in private, obstetric practice. Arguing from this point of view, Dr. Thorburn thinks that there would be no difficulty in conceiving how a tolerably definite train of symptoms ensuing from the action of septic or zymotic germs in the hyperfibrinated blood of a puerperal woman may, in some cases, take on a uniform character and epidemic virulence. Clearly another name than puerperal fever is needed, and if we need another what is better than metria?

As regards the pathology of metria, the two points ar stated by Dr. Lombe Atthill as admitted by all. First, under certain circumstances puerperal women are liable to be inoculated with septic material conveyed to and deposited in the vagina by the hands of attendants and other agencies, when proper precautions against this infection have not been adopted; the disease produced by this inoculation being frequently a source of one of the forms of metria; and second, puerperal women may be the victims of auto-inoculation, the poisonous material originating within their own bodies from the decomposition of blood-clots and placental remains after parturition. The disease thus produced Dr. Mathews Duncan prefers to call "sapræmia"—or a result of the absorption of putrid material—distinguishing it from "septicæmia, a disease produced by organisms which, when conveyed to the blood, multiply indefinitely in it;" Dr. Duncan holding that organisms resulting from putrefaction do not survive, far less grow, in the blood. The merits of the last proposition we will not now discuss; indeed, we rather doubt if it has any.

In addition to these two forms of metria Dr. Atthill asks if there are not two other forms which it may not be possible to guard against. First, a form of auto-infection occurring under special conditions and not preventable by antiseptic precautions, but happily preventable in many cases by other therapeutic measures. This form occurs in cases of continued uterine relaxation, thus leading to the second of the varieties already mentioned. The uterus does not properly contract, blood-clots are retained in its cavity which decompose and thus produce the disease. This condition of the uterus also favors the formation of other clots than those directly resulting from parturition, and the sinuses being kept open, favor the absorption of septic material. Though antiseptic measures are powerless here, the enemy can be combated by the administration of ergot, continued after labor until the desired effect is produced. As is well known, this condition of relaxation occurs most frequently after rapid deliveries. A consideration of these, we may say, facts, has led Dr. Atthill to believe that a relaxed condition of the uterus—doubtless caused in a great measure by the great mental distress—is one of the causes of the frequent occurrence of metria in unmarried women. Clearly in these cases the prime cause, viz., relaxation of the uterus must be combated by oxytocics. The mortality among this class of patients is very great, and in the absence of hitherto successful means of staying it, it is advisable that this remedy have a thorough trial. It is important to remember, however, that many cases of uterine relaxation will yield to persistent kneading, one hand being placed on the abdomen, and the other introduced into the uterus.

A late paper by von Swiecicki (*Centralbl. f. Gynäk.*, No. 16, 1883), in which he expresses the opinion that persons engaged in obstetric practice should not perform *post-mortem* examinations, or dissect, or if they do should quarantine themselves from the lying-in chamber for a certain length of time, has been followed by a free expression of opinion. Löhlein takes exception to v. Swiecicki's arguments, believing that proper antiseptic measures are all that is necessary, and Fritsch, in commenting upon Löhlein's paper, practically agrees with him (*Centralbl. f. Gynäk.*, No. 23, 1883). It would

seem, however, that antiseptic precautions alone are not a sufficient safeguard. Löhlein and Fritsch have had, it is true, exceptional good fortune, but recent experiments have shown that micro-organisms are not so easily destroyed by antiseptic agents, and we doubt much if simply washing the hands in antiseptic solutions will obviate the risks of inoculation after handling septic material; and the adoption of Dr. Atthill's rules is by far the safest method. Students attending the patients of the Rotunda Hospital in Dublin, are not allowed to dissect or make post-mortem examinations, or attend a hospital containing patients suffering from infectious diseases; and before examining any patients they are required to wash their hands in a solution of carbolic acid. During the first six and a half years of his mastership in the Rotunda, these precautions sufficed to prevent anything like an epidemic of puerperal septicæmia.

The treatment of puerperal sepsis is but little, if any, more satisfactory than its pathology. When several cases, coming with shorter intervals, occur in a hospital, there is but one method to be pursued. The patients must be removed, the wards disinfected, the floors and walls washed with strong disinfecting solutions, and everything else thoroughly disinfected. As to the choice of a disinfecting material, it would seem that corrosive sublimate is the most certain in its effects. In private practice prophylactic cleanliness, thorough emptying of the uterus after delivery, and the insurance of uterine contraction, are the best and only safeguards so far as the woman is concerned. It is scarcely necessary to reiterate the cautions as to the cleanliness of instruments and the hands of the accoucheur. When, however, by any mishap, the puerperal woman is seized with the disease, our main reliance must be placed in quinine, intra-uterine injections, opium, and stimulants. At present, cases of puerperal sepsis are extremely liable to take on a remittent form, and quinine must be given in full doses. In America and other countries where the malarial element is predominant, the dose of three to four grains every three or four hours, recommended by Mr. Thomas More Madden, is scarcely less than child's play. It is important to remember that a given amount of any drug is not a dose unless it has the required effect. It may also be stated quite positively that the day for depletion in these cases has passed. As a rule, they assume an asthenic type and need stimulation. Intra-uterine injections are of the utmost importance, but caution is required in their use, and to employ a syringe which is not perfectly clean is worse than useless. Lastly, the bowels should not be neglected, and it is important that they should act, and thoroughly, before the patient is fully under the influence of the opium, in case that drug be employed; for in these cases it is extremely difficult to re-establish peristaltic action after it has once been paralyzed.

THE PROPER CARE OF THE EYES OF THE COMING GENERATION.

In connection with the late address of Mr. Charles Francis Adams on "A College Fetich," and our recent editorial, "Greek or German—Which?" it may not be entirely foreign to make a few remarks on the subject of the German Alphabet from a hygienic point of view. The systematic examination of the eyes of school-children might lead one to suppose that the youthful Teutonic eye is presbyopic, hypermetropic, ametropic—anything except normal. Dürr found the average myopia among the scholars of a Hanoverian school to be 31.7 per cent. Reich found an average of 33 per cent. in another school. Nor is the solution at all difficult to one who has turned from an English to a German book printed in the abominable text of the latter language. German authors are inclined to attribute this to the position during writing, bad light, etc. These may be factors, but they do not seem to have thought of their outrageous letters, and still more outrageous script. Every one acknowledges the importance of the German language, especially in scientific studies. But why should American children, and adults, for that matter, be compelled to gain their first knowledge of that beautiful and expressive language by poring over its crooked, "sich ähnlichen" letters? The grammars, dictionaries, and general literature are printed in this text, and nothing else, so far as we are concerned. All, or almost all of the German books used for instruction in this country are printed here, and is there any reason why they should not present a respectable appearance in English type? Surely there is every reason that they should. The myopic eye turns from the neat and inviting page of the *Berliner Klinische Wochenschrift*—or any other German journal—to the bewildering fog of the dictionary printed in America, and figuratively groans. Here is room for a needed reform. The proper care of the eyes o the coming generation is of vital moment. School boards and teachers have it in their power to banish this evil from our schools. Let them do it, and our bookmakers will take the hint.

ENGLAND AND THE CHOLERA.

The English are beginning to show signs of displeasure at the comments of the Continental press upon the cholera in Egypt and the responsibility of Great Britain for its outbreak in that country. Lord Granville has recently addressed a communication on this subject to the Minister of Foreign Affairs of France. In this note the principal accusations of the foreign press against England are summed up as follows: 1. The origin and mode of propagation of cholera are well known and well understood. 2. Quarantine is the recognized and succesful means of preventing the spread of the epidemic. 3. Cholera is always brought by ships coming from India. 4. Her Majesty's government has profited by its situation in Egypt to compel the Egyptian government to relax the only precautious known to prevent the spread of the disease, in order that British commerce may not be impeded. 5. Her Majesty's government has consequently deliberately introduced the cholera into Egypt. To all this Lord Granville answers by a general denial: The origin and mode of propagation of cholera is as get undetermined; quarantine is valueless as a preventive measure; cholera is not brought to Europe by vessels from India; and lastly, although not believing in quarantine, England has done nothing to interfere with the regulations of the Egyptian government in this regard. The British Foreign Office request that its communication be given publicity in order that misapprehensions regarding England's conduct in this matter may be re-

moved from the mind of Europe. We doubt, however, whether Europe will accept the views of the British ministry on the nature of cholera. But the symptoms of irritation are not confined to official quarters. The *Medical Press and Circular* grows angry at its brother of the *Wiener Medizinische Zeitung* for speaking in a disrespectful manner of England's remissness. It quotes at some length from the offending article in question, and concludes in a somewhat excited strain, as follows:

"The article contains more, much more, of this hysterical nonsense. The writer, if he ever had any wits, has plainly been *erschreckt* out of them by the *schwarzem Gast vom Ganges und Bramaputra*. It is not necessary to make further comments on such a ridiculous production, in which imagination and spleen have performed the duties that ought to have devolved upon reason, and which would have been unworthy of notice on our part had it not received an official stamp as an editorial."

In spite of dignified official utterances and somewhat less dignified journalistic protests, the world will probably persist in the belief that England has not done her whole duty in respect to the cholera in Egypt.

THE CURE OF CHOLERA BY COLLODION.

DURING the recent epidemic of typhoid fever in Paris, the number of remedies proposed for the cure of this disease was legion. Volumes were written to prove that this or that method was certainly infallible, and that all that was needed to stamp out the epidemic was a general conformity by the profession to the views of the writer. In spite of these valuable discoveries, however, the epidemic went on. The time is now ripe for the publication of sure cures for cholera, and we shall soon be so abundantly provided with never-failing remedies that the fame of the "*Sun* mixture" will pale by comparison. Among the first to enter the field is Dr. Arsène Drouet in *Le Courrier Médical* of July 28, 1883. The method is very simple, and consists merely in the application of collodion to the abdomen. He says that nature, when she essays to cure cholera, does so by determining a perspiratory crisis, and collodion acts in a similar fashion. After its application it irritates, by reason of its constructive action, the nerves of sensibility whose terminal filaments lie in the skin of the abdomen. Thence a reflex inhibitory action is exerted in the motor, vaso-motor, and secretory nerves, and there follows an immediate arrest of vomiting and alvine discharges. Then, little by little the blood returns to the subcutaneous capillaries of the abdomen, the surface becomes warm, and finally a profuse perspiration breaks out, carrying with it the *materies morbi*. As a beverage, the patient is allowed cold water or seltzer. By this method Dr. Drouet claims to have cured two hundred cases of cholerine and thirty cases of true cholera. The favorable reaction commences within ten minutes and proceeds with a rapidity so extraordinary that it must be seen to be believed. Cholerine is always cured by a single application of collodion within five hours. Severe cases of undoubted cholera require two or three applications, at intervals of one hour, and are only cured in from six to seven and a half hours. The first coating is made with ordinary contractile collodion. A piece of coarse cheese cloth or mosquito-netting is stretched tightly across the abdomen, and over this the application is made. When the contraction becomes painful the film of collodion is removed by pulling off the cloth, and then a second application is made of flexible collodion which has still contractility enough to produce the desired effect. This method is not new, and has singularly enough been discovered by four observers in different countries and at different times. In conclusion, the author suggests that the inhabitants of countries ravaged by cholera be instructed to carry about little phials containing collodion, and to paint their own abdomens upon the earliest symptoms of the dread disease declaring themselves. Further, if this treatment be practised on board ship, every case of cholera could be cured at once, and there would be no more need of quarantine.

We can only express our surprise that Dr. Drouet did not hasten to Egypt upon the earliest tidings of the outbreak of cholera in that unhappy land, and there demonstrate the value of his method. Aside from the sweet consciousness of having saved the lives of untold thousands of Egyptians, and of having in all probability averted the scourge from Europe and America, he would have achieved a fame beside which that of all others of the world's heroes would have paled. A grateful world would have loaded him with riches and honors, and his name would have been cherished by all coming generations to the end of time. Perhaps, however, he was unwilling to rob Pasteur of the glory of discovering the microbe of cholera.

HÆMATEMESIS FROM WASHING OUT THE STOMACH.

IN 1881 Bouicli pointed out the advantages of washing out the stomach in cases of simple ulcer, reporting at the time a patient, very cachectic, with constant rejection of food, both liquid and solid, who had had several hæmatemeses, and who rapidly gained flesh and strength and digestive ability after the commencement of the washings. Bucquoy had already reported, in 1880, a case of simple ulcer, in which washing out the stomach arrested the vomiting. Küssmaul had also reported similar good results, and, as is well known, Débone has treated a large number of cases in this manner.

In spite of these favorable cases, in which no mention is made of hæmatemesis, Germain Sée, in his work on dyspepsia, looks upon this procedure unfavorably, as he believes that there is a risk of destroying a vascular wall and thereby producing hemorrhage, or of re-opening an imperfectly formed cicatrix, and provoking a new hemorrhage.

Cornillon has recently reported a case which seems to bear out these views of Sée (*Le Progrès Méd.*, No. 17, 1883). An alcoholic person, who for ten years had suffered more or less from epigastric pain and vomiting, consulted Cornillon about two years after vomiting a quantity of clotted blood. Cornillon introduced about a quart and a half of water into his stomach, and found, on siphoning, that it contained a substance similar to black coffee. On repeating the washing, there was less of the black substance, but when water was introduced a third time, it returned distinctly reddened, and containing a number of clots. When the washing was repeated two days later, there was quite marked hæma-

temesis. Cornillon attributes the hemorrhage to the quantity of water, and the force with which it was introduced, and he doubts the propriety of this measure in cases of recent ulcer, for fear of dislodging a clot and thus provoking hemorrhage.

READING OF MEDICAL BOOKS IN COURT.

REFERENCE was made in these columns a short time since to the rule in vogue in the courts of a large number of the States, forbidding the reading of medical books to the jury, in criminal cases.

This rule had an illustration in a Michigan court a short time since, where a verdict was reversed because the counsel on one side had succeeded in a device to get the book before the jury. The facts were these: On the cross examination of a physician who was testifying for the defence, he was asked if he was acquainted with a certain book. He replied that he had heard of it, but had not read it. He was then asked whether it was considered good authority, and he said it was. He was then requested to read a certain paragraph during the recess of the court. When the court convened again he was recalled, and counsel reading from the book the paragraph to which his attention had been called, asked him whether there was a case reported of taking sulphate of zinc, followed by vomiting, purging, and death? As this was what the paragraph stated, the evident purpose of the question was to put the passage from the book in this indirect manner before the jury instead of reading from it directly. The question having been allowed by the judge and answered by the witness, the Appellate Court held the error to be sufficient for a reversal.

THE DEGENERACY OF THE FRENCH INDIVIDUALLY AND AS A NATION, AND WHAT TOBACCO IS ACCOUNTABLE FOR.

A SUCCESSOR of the late lamented Trask has appeared across the water in the person of Dr. Decroix, who raises his warning voice against tobacco, and threatens his fellow-mortals with ruin—physical, moral, and mental—if they do not rise in their might and stamp out the weed. In a communication recently presented to the Academy of Medicine of Paris, he takes a most gloomy view of the future of the French race, and incidentally of the rest of mankind. He says that the death-rate in France greatly exceeds the birth-rate, and that the population of the country is steadily decreasing. It is becoming difficult to find recruits for the army who are physically fit for military service, and the average stature of the individual is constantly becoming lower. Morals are becoming lax, and crime is growing more prevalent. Physical beauty is rare, and mental alienation and idiocy are increasing at such a rate that the asylums are unable to contain all the unfortunate victims. The cause of all this moral and physical decay he finds in the use of alcohol and tobacco. The picture he draws of the baneful influence of these poisons, the latter especially, upon the social body, is one fearful to contemplate. This it is that effaces the lines of beauty in the countenance and in the form; this it is that degrades the intellect and corrupts the moral nature. Here is to be found the active cause of sterility, or if by chance a baby is born, this is the demon that robs it of its mother's milk, the fiend that chokes with its damnable nicotine the lacteal springs that lie deep down within the maternal breast. It kills one-half of all who see the light of day before their little lives have spanned a semicircle of the year.

Spain was once the mistress of the sea, the proud ruler among nations, the queen of poetry and song, the home of chivalry and valor, rich, proud, beautiful, wise, virtuous, and renowned. It sent its fleets to the far West to explore the new land, and to bring back its treasures of gold and silver and precious stones. The stately ships returned, laden not only with all the riches of Eldorado, but also, alas! with the "panacea of the Indies," the noxious weed—tobacco. From that period dates the decadence of that once glorious nation. The habit of smoking the poison spread with fearful rapidity over the devoted country. It seized upon the king and the peasant, the holy bishop and the humble donado. Lords and ladies all smoked and smoked until the once fair land was enveloped in nicotine-charged mist, and the glory of Spain was but a thing that is gone. And this is the fate in store for luckless France. Tobacco was the cause of the disasters of the Franco-German war, and tobacco will be the occasion of far greater evils still to come.

Undoubtedly, tobacco has much to answer for. Its injurious effects upon growing boys are quite evident, and it is truly a saddening sight to see children hardly six years old pulling away on the cheap and nasty cigarettes which have recently descended upon us like one of the plagues of Egypt. But to claim that Spain's decay resulted from the use of tobacco, and that France will owe its inevitable fall to the same cause is, to say the least, an extravagant assertion. It is a pity that apparently earnest men, advocates of temperance in material things, should so often themselves be intemperate in words. Nothing good or lasting was ever accomplished by falsehood, and nothing good or lasting can result from its twin brothers, exaggeration and distortion of facts.

News of the Week.

PROGRESS OF THE YELLOW FEVER.—During the past week no cases of yellow fever have been reported in the United States outside of the Pensacola Naval Reservation and the Government quarantines. Only five new cases and three deaths at the navy yard have been reported, and the house-to-house inspection of the adjacent villages of Woolsey and Warrington, as well as the inspection at Pensacola, have discovered no hidden cases, so that hopes are entertained that the disease has spent its force and will soon disappear. There is much suffering among the people of the villages (squatters), who are unable to provide themselves with the necessities of life, and many appeals have been made in their behalf for aid out of the Epidemic Fund, but the Department has decided that only those in hospital or under treatment are proper beneficiaries of the fund. Governor Bloxham also states that he is unable to help them, as there is no appropriation for the purpose, and thinks as they are on the Government reservation and quarantined by the Government, that it ought to take care of them.

The report of Acting Assistant-Surgeon Fitzhugh Finney for the past week shows twelve vessels in quarantine

at Ship Island and nineteen cases of yellow fever and five of ague, with three deaths from the former disease. Reports from Sapelo quarantine show no transactions, no infected ship having put in at that station. At Cape Charles quarantine a vigorous inspection is kept up by Surgeon Smith who boards all foreign vessels, whether from infected ports or not.

Sanitary Inspector Burgess telegraphs from Havana the departure of the following named infected vessels for the ports stated: Bark Doce de Juno, for Brunswick, Ga.; Spanish bark Christiana, for New York.

Thirty-two deaths from yellow fever occurred at Havana during the week ending August 24th, and there is still considerable yellow fever in the city, but very little among the shippiug. It has been officially reported that the Captain-General recently issued an order forbidding the Consul to issue bills of health and directing the local board (sanitary) only to give them. No attention will be paid to this order by the United States Consul, as no faith can be placed in the sanitary report of the local board, particularly as their "fumigation" of vessels consists in giving to the master a four-ounce vial of mild fumigant for which he is charged ten dollars, and which the master throws overboard!

To form some idea of the sanitary condition of Cuba the following translation of an article which appeared in the Matanzas *Correo de la Tarde* (*Evening Mail*), of August 18th, is herewith presented. The first paragraph was difficult to translate, because in the editor's effort to be ironical he forgot his logic—however, it will pass:

"It is often said, and generally believed, that Cuba is not healthy, and yet the facts are that this description cannot be more unjust or untrue, because if there exists in every other town the same noxious elements which are apparent here (Matanzas), and if all could show the same proportion of mortality, a proportion which, without exaggeration, is much below the average, —it deserves the name of being very healthy; and yet it is strange, all things considered, that a single soul lives.

"Picture to yourself a city which is bounded on one side by the marshes of the Yumury, whose deadly miasma is daily swept over it by the breezes which generally blow from that direction, and on the other side by a bay into which a great deal of organic matter is deposited by the currents of the two rivers. Picture to yourself other marshes which exist behind the suburbs of the town. Picture again to yourself a provision market always dirty, and surrounded by a sewer which continually gives forth bad odors. Go on picturing to yourself that in the centre of the town there exist many streets full of cesspools and filthy ditches, and on every two or three corners piles of offal. Picture to yourself, again, that on the banks of one of its rivers, which is the city's chief source of commerce, one sees immense sheets of stagnant water, covered by a greenish scum, and which renders a communication with the above houses almost impossible. Picture, lastly, to yourself that from the milkman at one corner of the street to the fisherman at the other, whose strident yells distract and annoy us—that from the butcher behind his counter, awaiting his victims, to the fruit and vegetable dealers wandering through the streets—that from the most elegant café to the humblest grocery store, they can in spite of all law sell us a 'cat for a hare,' as the vulgar say—and in face of all this, dispute the statement we have expressed above.

"The vigor with which the question is treated in the capitals of Europe is unknown to us—as our condition is inconceivable to them. They cannot understand that possessing laws, as we do, exacting as their own, we should permit them to become dead letters from the indifference with which they are treated. But for that would they sell us the adulterated milk, which does not kill because, like Mithridates, we are used to poison? Would our streets otherwise be filled with numberless pedlers, free from the danger of molestation, offering us for sound, rotten fish? And others offering as harmless fruit ripened by fire? And still others offering for sale tainted flesh which they bring in their filthy trays? But for this marked indifference would so many vagabond dogs wander through our streets, and so many horses be attacked by suspicious coughs? It is necessary, therefore, that this lamentable state of affairs should be remedied for the good of all and the satisfaction of our own conscience. And would that our humble words, which have no tendency except the common weal, might carry this conviction to certain minds."

Sanitary Inspector Mainegra reports by letter that the sanitary condition of Vera Cruz is much improved, owing to copious rains with thunder and lightning refreshing and purifying the atmosphere. He states that the type of the fever has been very fatal, the mortality even among private cases being about thirty per cent. As there is no reports made by the authorities, he was unable to get at the whole truth, but thinks it would show a still greater mortality. He gives the following figures: Deaths in 1882, 72; in 1883—January, 1; February, 1; March, 7; April, 16; May, 90; June, 261; July, 200; August, up to 16th, 38. He regards all vessels sailing from Vera Cruz infected, and if bound to any Southern port, advises them to put in at Ship Island or Sapelo Sound quarantine station for inspection.

The U. S. Consul at Tampico, in a despatch to the Secretary of State says: "I have the honor to report that the authorities of this port have, since the 1st of this month (August), established a quarantine of eight days against all vessels arriving from Vera Cruz and from other infected ports—that term to be reckoned for vessels arriving from Vera Cruz, from the date of departure therefrom. This port and vicinity enjoy good health to this date, and there is no suspicion of plague, cholera, vomito, or contagious distemper whatever in this district."

The United States Consul at Matanzas, Cuba, in transmitting his weekly consular report of the sanitary condition of that place says: "The sanitary authorities all combine to withhold information from me; however, sufficient cases of yellow fever exist to seriously infect the port and make watchfulness a necessity, and strict quarantine a matter of wisdom. The Captain-General has issued orders forbidding Consuls giving Bills of Health, transferring that duty to local sanitary boards, and I would suggest that if any foreign vessel enters without my Bill of Health, that the penalty prescribed by law be enforced."

In answer to a despatch of inquiry sent the Consul at Saint Thomas, W. I., he states that there has not been a case of yellow fever at that place for the past two years.

There were twenty-nine deaths from yellow fever at Havana last week.

PROGRESS OF CHOLERA.—The department of State has received and transmitted to the Treasury department despatches from the U. S. consul-general at Constantinople, dated July 19–21, in regard to the cholera in Egypt and the sanitary condition of Constantinople. He says that when the cholera was reported in Damietta it created the greatest alarm in Constantinople, and stringent orders were immediately issued to exclude it from the country, as well as to combat its ravages if it succeeded in getting a foothold. All arrivals from Egypt were required to undergo quarantine at the entrance of the bay of Smyrna. The limited accommodations at Beirout and Bouria were enlarged, but the panic-stricken refugees from Alexandria came in such numbers, that the quarters soon became insufficient to accommodate them; and as each day brought fresh arrivals, the sufferings of the people from exposure to the burning sun and the chilly night dews became very great, and threatened to create the very evil it was intended to guard against. The arrivals at Beirout were the greatest sufferers, and the authorities were finally compelled to telegraph to Alexandria to give warning that no more refugees could be received, or would be allowed to land. But while the sanitary administration were employing the best means their resources admitted of to prevent the introduction of cholera, the orders from the palace for the cleansing and disinfection of Constantinople were totally neglected, as was also the case in the provincial towns. The most elementary measures of precaution had not even been commenced, after the cholera existed at Damietta for over a month. The ditch draining into the Golden Horn, which drains about two square miles of land thickly built up and densely populated, receives, through a thousand tributaries, all the sewerage of that large district. It is an open stream of filth, and its noxious gases spread with every breeze to distant quarters. This pestilential ditch still yawns and befouls the atmosphere of Pera, and other quarters facing the Golden Horn. While the authorities are discussing measures to improve the sanitary condition of the city, the streets remain unswept, the sewers choked and overflowing, or open, and indescribable filth and garbage go on increasing in open spaces the accumulation of years. The consul-general says that, as under these circumstances it can scarcely be expected that Constantinople will escape a visitation of cholera, it is his duty to call the attention of our sanitary authorities to the necessity for taking prompt precaution against its importation into the United States. There are several classes of goods that originate in the East, that have been active agents in the introduction of infectious diseases—hides and skins, rags, rugs, and carpets, and woollen, cotton, silken, linen tissues and embroideries, mostly old and worn. It will be no safeguard that these goods reach the United States through European ports, unless there is evidence that the packages have been opened and disinfected before reshipment. Danger is especially to be apprehended from rugs, which come from remote parts of Asia. It is well known that when the plague has prevailed in Constantinople, the bazars where these goods are sold were centres of infection.

Russia has virtually put the whole world in quarantine as regards her southern ports, as an order has been issued that all vessels passing the Dardanelles, under whatever flag, shall be subjected to quarantine on arrival at any of the Black Sea ports.

The consul-general encloses tables giving the number of deaths from cholera in Egypt, to July 15th, as 2,932, of which Damietta had 1,740, and Mansourah 825, and says, considering the density of the population of the delta of Egypt and the habits of the inhabitants, the rates are not extraordinary. The outbreak of the cholera is sufficiently accounted for by the condition of the towns infected. Before the epidemic appeared a cattle plague of extreme virulence had been raging for some time, and such of the infected animals as were not slaughtered for food were allowed to die of the disease, and after being skinned, their carcasses were thrown into the river and canals, whence all the drinking water is drawn. The hides, after drying, were stored in the villages to be sold. In some places carcasses were tied to the banks of the river to attract fish and render their capture easier, and these fish, feeding on putrefied flesh, were sold for food. The water in many of the canals is almost stagnant, and has become putrid from the number of carcasses thrown into them. Everything seems to have been done to create and propagate cholera, and it is quite useless to seek its origin in India, when such abundant causes for its generation exist in every part of the Delta. Since the military cordons have been established around infected places—either through ignorance or from malevolence—they not only do not allow any one to pass out, but they allow nothing to pass in, not even provisions or medicines. Meanwhile the dwellers in these plague-stricken places are without food and medicines, and it is not to be wondered at that they should eat the carcasses of animals that have died of disease, preferring to risk the chance of cholera rather than incur the certainty of death from starvation. The wonder is, not that there is cholera in Egypt, but that the mortality is not much greater than reported.

The consul reports the population of some of the principal towns of Lower Egypt, according to the recent census, as follows: Cairo, 368,108; Alexandria, 208,778; Port Said, 16,560; Suez, 10,913; Tantah, 33,725; Damietta (where the cholera made its first appearance), 34,068; Rosetta, 16,671; Mansourah (second place attacked), 26,784; Zagazig, 19,046; the whole of Egypt, 6,798,200.

Sanitary Inspector Hill, stationed at London, England, in his abstract of "Bills of Health," states that the British steamer Newcastle City "left port in a dirty state, with 335 tons of rags and paper-stock (200 tons British, 35 Parisian, 80 Russian, and 20 Dutch) for Boston; and that the British steamer Canada carried 120 tons of rags obtained from Northern Prussia." He also states that deaths in London from choleraic diarrhœa number six to eight each week.

At a meeting of the Board of Health, held at Gibraltar on August 10th, it was decided that all arrivals from Syria and from the Ottoman ports be subjected to a quarantine of twenty-one days.

PROCLAMATION.—By His Excellency Sir John Miller Adye, Royal Artillery, Knight Grand Cross of the Most

Honorable Order of the Bath, Knight Commander of the Legion of Honor, and of the First Class of the Military Order of the Medjidie, Lieutenant-General of Her Majesty's Forces, Governor, Vice-Admiral, and Commander-in-Chief of the City and Garrison of Gibraltar, etc., etc., etc.:

Whereas in and by a certain Order, bearing date at the Court at St. James's on July 13, 1830, and made by His late Majesty, by and with the advice of His Privy Council, to regulate and provide for the performance of Quarantine at the Garrison and Territory of Gibraltar, it is among other things ordered that the Order or Orders from time to time made by the Board of Health of Gibraltar, in pursuance of the said Order of His late Majesty, for carrying into effect the Regulations and Provisions thereof, shall be duly published at Gibraltar by Proclamation.

And whereas the said Board of Health having made the Order hereinafter following, the same is hereby published and proclaimed in pursuance of the said Order of His late Majesty in manner following, viz: That all arrivals from Syria and Ottoman Ports be subjected to a quarantine of twenty-one days.

Given at Gibraltar, August 10, 1883.

By Command, GIFFORD, *Colonial Secretary*.

Official reports up to August 31st, show that there have been 27,318 deaths from cholera in Egypt since the outbreak, this includes 140 among the British troops stationed there.

Official reports from Shanghai, of July 23d, received by the State Department, announce the fact that "the cholera had assumed an epidemic form at the Port of Swatow, but while many deaths had occurred in consequence, they were confined entirely to the shipping and native population. Hong Kong has declared Swatow an infected port, and strictly enforced quarantine regulations against vessels arriving from there." The Consul-General called a meeting of the Consular body to take action for the protection of Shanghai by the enforcement of quarantine regulations, and he was requested to communicate with the Chinese officials, asking their co-operation in the enforcement of the regulations of 1874. Nearly all the cases occurring at Shanghai have also been among the shipping and natives—those dying among the foreigners were mostly sailors.

DR. HENRY MAUDSLEY is visiting this country. He stays but a short time and is travelling very quietly, being desirous of obtaining rest and health.

SANITARY REFORMS IN TORONTO.—The people of Toronto are becoming awakened to the real value of preventive medicine. Dr. Oldright, Chairman of the Provincial Board of Health for Ontario, and Dr. Canniff, health officer for Toronto, have been busy lately looking into matters of public health and reporting upon unhealthy localities and nuisances. Policemen have been detailed in pairs to make a thorough inspection of Toronto. They are authorized to go into houses, stables, yards, cellars, factories, schools, etc., and are provided with blanks to make reports on in the event of any unhealthy condition being found. Although Toronto has taken the lead in this matter, other cities are moving in the same direction. Much good must follow so systematic a course of investigation. The Committee on Public Health of the Ontario Medical Association urge strongly that hygiene be taught in all the public schools in lieu of less important subjects.

CONVALESCENT HOMES IN CANADA.—Considerable attention is being directed to convalescent homes, both in connection with the general hospital and for sick children. In the case of the latter a neat summer resort has been erected on the island about a mile from Toronto. Here the little invalids are removed from all noise and disturbance and get the benefit of the cool Lake Ontario breeze. More of such places are required throughout the country in healthy, open localities, instead of large, dreary hospitals in busy, crowded cities. There is ample room for them, and abundance of means to sustain them. It requires but the stimulus to be given in this direction and we shall soon have many of these suitably located convalescent homes.

AN EPIDEMIC OF DYSENTERY.—The *Mississippi Valley Medical Monthly* states that an epidemic of dysentery is now prevailing at Byhalia, Miss., about twenty-five miles from Memphis. Sixty or seventy deaths have recently occurred in that vicinity, and considerable alarm prevails. It is rumored that some neighboring towns have instituted quarantine for protection.

MEETING OF GERMAN NATURALISTS.—The fifty-sixth annual meeting of the Society of German Naturalists and Physicians will be held at Freiburg, on September 18th, 19th, 20th, and 21st.

NEW HOSPITALS IN PARIS.—The Municipal Council of Paris has recently voted a credit of $600,000 for increasing the hospital accommodations of that city. The sum of $400,000 is to be devoted to repairs and additions to already existing hospitals, while the balance of $200,000 will go toward the erection of a hospital for the treatment of chronic diseases, a small-pox hospital, and a children's asylum for incurables. The entire cost of these three new hospitals, when completed, will aggregate about $2,250,000.

THE EIGHTH ANNUAL MEETING OF THE AMERICAN GYNECOLOGICAL SOCIETY will be held in Philadelphia, at the Hall of the College of Physicians, on Tuesday, Wednesday, and Thursday, September 18th, 19th, and 20th. Papers are expected to be read as follows: "Superinvolution of the Uterus," by Dr. Joseph Taber Johnson, of Washington; "The Importance of Cleanliness in Surgical Operations," by Dr. R. Stansbury Sutton, of Pittsburg, Pa.; "Some Points Connected with the Subject of Dysmenorrhœa," by Dr. C. D. Palmer, Cincinnati; "An Unusual Form of Abdominal Tumor," three cases, by Dr. Thaddeus A. Reamy, of Cincinnati; "Is Extirpation of the Cancerous Uterus a Justifiable Operation?" by Dr. A. Reeves Jackson, of Chicago; "A Biographical Sketch of Dr. Nathan Smith, Founder of the Dartmouth Medical College" (being the President's address), by Dr. Gilman Kimball, of Lowell, Mass.; "The Management of Accidental Puncture and other Injuries of the Gravid Uterus as a Complication of Laparotomy," by Dr. Charles Carroll Lee, of New York; "A New Method of Operating for Fistula in Ano," by Dr. Edward W. Jenks, of Chicago; "Ergot: The Use and Abuse of this Dangerous Remedy,"

by Dr. George J. Engelmann, of St. Louis; "Congenital Fissure of the Female Urethra with Extrophy of the Bladder," and "Menstruation after Extirpation of the Ovaries," by Dr. Henry F. Campbell, of Augusta, Ga.; "Remarks on Chronic Abscess of the Pelvis," by Dr. William H. Byford, of Chicago. A discussion on "Death after Labor" will be opened by Dr. Campbell.

Correspondence.

FEMALE MEDICAL EDUCATION FROM A WOMAN'S STANDPOINT.

To the Editor of The Medical Record.

SIR: In response to your Canada correspondent, in your issue of August 25th, allow me to say that

> "He either fears his fate too much,
> Or his deserts are small,"

who feels it necessary to his own safety as a practitioner to decry the medical education of women.

In your correspondent's statement that "exception was taken by those ladies to some remarks made by the lecturer on physiology," I can see nothing to indicate that those same ladies, or ladies in general, are, therefore, unfit subjects for the study or practice of medicine; nor can I see in the fact that "the men" (your correspondent makes a nice distinction in not calling them *gentlemen*) "in the class became noisy and made statements that greatly offended the ladies," any special or superior fitness on their part.

It is not worth while to argue the point whether coeducation will or will not work, when we see conspicuous instances of its success increasing around us; but we pass on to his gravely expressed foreboding that "there cannot be any doubt in the minds of all who think calmly on the matter, but that these young female doctors will locate on our streets, and in our villages and towns." And pray what if they do? Will the public morals be wrecked in consequence? The social scientist, if *he* "think calmly on the matter," will doubtless tell us society is better for a young woman "locating on our streets" to practise legitimate medicine, than if forced by the closure of all avenues of respectable work she "walk" that same street for bread. Our friend shows lack of knowledge of the number of women who have gone out as medical missionaries, of the constantly increasing call from the mission fields for more workers, and of their great usefulness there. A letter written me in 1880 by a former pastor, a prominent Presbyterian divine, contains this statement: "I have a friend in India, a medical missionary, who has had much success, having had five thousand cases among the Indian women in ten years." Surely that woman has found her work, and is doing God and humanity better service than by devoting her immortal energies to making rick-rack trimming for her dresses.

In answer to the scathing remark that "it is all a question of dollars and cents with the ladies who wish to secure medical qualifications," I can only say that whenever society reaches that happy stage of gallantry to our sex that the tradesman and artisan refuse to accept from us an equivalent of "dollars and cents" for their work and their wares, doubtless the percentage of women who practise medicine from philanthropy, pure and simple, will more nearly approximate that of the men in the profession who decline all fees.

"The move is very unpopular with the profession at large in this country." I would suggest that our progressive physicians are not opposed to it, but willing to see it stand or fall on its own merits. Its unpopularity is mainly among those whom Charles Reade so aptly describes as "pig-headed beyond belief."

That it is not unpopular with the laity, who, after all, are the true arbiters in the matter, is shown in the amount of work women are doing throughout the land.

From the nature of things the practice of women must be more limited than that of men has been. We seek only the privilege of treating the ills of our own sex, and in the field of gynæcology and obstetrics who shall deny that we have fit place.

In accordance with that sure law of supply and demand, just so long as sensitive women prefer to consult competent physicians of their own sex for the ills peculiar to their sex, just so long will the demand be met by competent ladies, educated, if not in Kingston or Toronto, then in New York, Philadelphia, Ann Arbor, Syracuse, Paris, Vienna, etc. The world moves.

Caroline S. Pease, M.D.

Troy, N. Y.

Reviews and Notices.

Treatment of Diseases of Infancy and Childhood, with over four hundred Formulæ and Prescriptions, as exemplified in the services of Drs. A. Jacobi, J. Lewis Smith, Alonzo Clark, Austin Flint, W. A. Hammond, A. L. Loomis, W. H. Thomson, J. H. Ripley, T. Gaillard Thomas, J. R. Leaming, F. Delafield, L. A. Sayre, C. R. Agnew, L. Duncan Bulkley, Beverley Robinson, R. W. Taylor, G. H. Fox, F. N. Otis, A. A. Smith, E. C. Seguin, F. A. Burrall, E. G. Janeway, F. H. Bosworth, A. H. Smith, C. E. Billington, G. M. Lefferts, etc., etc., and in the Hospitals of New York City. By Charles H. Goodwin, M.D. New York: C. H. Goodwin, M.D., 245 West Fifty-third Street. 1883.

The success which we predicted for the author's previous manual on treatment of heart and lung diseases has been realized, and has led to the preparation of this companion volume. This excellent little book is not a mere jumble of formulæ thrown together hap-hazard, but is a systematized and well-ordered collection of the favorite prescriptions of some of the best-known physicians in this city. Each subject is prefaced by a short explanation of the rationale of the treatment followed. While heartily disapproving of the use of ready-made prescriptions, we still think that the publication of formulæ such as this book contains is of value as giving in brief the matured views of men of wide experience in the treatment of disease. Such a book as this is naturally used for the most part as a ready reference manual, and we think its value in this respect would have been greatly enhanced by an index arranged alphabetically instead of by groups.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-fourth Annual Session, held at Norristown, May 9, 10, and 11, 1883. Vol. XV. Philadelphia: Published by the Society. 1883.

This volume is excellently printed in clear type and neatly bound in cloth. It contains a number of good papers on a great variety of topics. One hundred pages of the Transactions are taken up with reports of very little interest from the County Societies. The volume also contains the circular of the Society for Instruction in First Aid to the Injured, of New York City, which was ordered by the Society to be printed after the report on Surgery.

Physiological Cruelty; or, Fact vs. Fancy. An Inquiry into the Vivisection Question. By Philanthropos. 8vo, pp. 156. New York: John Wiley & Sons. 1883.

In this work the author has presented the chief established facts and the principal arguments on the subject of vivisection. The text is, in general, quite accurate in

detail, without evidence of partizanship, and is well worth the attention of the profession. Certain of the more obvious statements which have appeared in print are touched upon; but, as a rule, the numerous popular questions raised upon this matter, and the various results arrived at are avoided. An appendix is also added containing further information on special points.

Reports of Societies.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE Fourteenth Annual Meeting of the Medical Society of Virginia convened in the ball-room of the Grand Hotel, Rockbridge Alum Springs, Rockbridge County, Va., at half-past eight Tuesday evening, September 4th, the President, DR. WM. D. COOPER, of Morrisville, in the chair.

REV. DR. J. J. LAFFERTY, of Richmond, Va., opened the meeting with prayer.

The Naval Academy band from Annapolis, attached to the hotel for the summer, played at intervals during the evening.

The address to the public and profession was delivered by DR. K. EDGAR CHANCELLOR, of Charlottesville, and was devoted to consideration of

THE DIFFERENT MINERAL WATERS OF THE WORLD.

He stated that out of the 876 natural mineral waters of the United States, only 300 had been properly analyzed and classified, and in the course of his address showed plainly the points of difference between natural and artificial mineral waters. He pointed out the manner in which the pure water is changed to mineral waters in the ground, and closed with the reasons for the natural production of hot or thermal waters.

Besides the Society members, a large number of ladies and gentlemen, guests at the hotel, were in attendance.

The Committee on Nominations reported 39 names of physicians for election to fellowship, all being afterward duly elected by the Society.

On Wednesday, September 5th, the Society met in the ballroom of the Rockbridge Springs Hotel, at 10 A.M., and, after opening the session, DR. WM. D. COOPER read the Annual Address of the President, his subject being

THE INDIVIDUAL RIGHTS OF PHYSICIANS,

in the course of which he pointed out the very limited protection afforded the profession by the State of Virginia, and gave some exceedingly valuable suggestions concerning the proper mode of action for redress.

DR. JOHN R. WHEAT, of Richmond, then read the report on Advances in Anatomy and Physiology, and confined himself mainly to a consideration of

THE ANATOMY AND PHYSIOLOGY OF THE MALE URETHRA.

He stated his belief that the surgery of the urinary passages will have made marked progress when it has the boldness to give the

PREFERENCE TO THE USE OF STRAIGHT INSTRUMENTS OVER CURVED SOUNDS, CATHETERS, ETC.

DR. A. M. FAUNTLEROY, of Staunton, made an exhaustive report on Advances in Chemistry and Pharmacy, considering fully the possibilities of the

ARTIFICIAL MANUFACTURE OF A NUMBER OF VALUABLE DRUGS

which now are only obtained in nature. He believed that the day was not far distant when quinine would be manufactured by the chemist without the necessity of handling cinchona bark. He recommended the use of the tonka or vanilla bean as being by far the best method of subduing or

COVERING THE ODOR OF IODOFORM.

The report was concluded with a detailed description of the properties and employment of convallaria maialis.

DR. M. G. ELLZEY, of Washington, read the report on Advances in Obstetrics and Diseases of Women. He advised against

THE TOO COMMON USE OF STYPTICS IN THE UTERUS,

and made an eloquent appeal for

LESS FREQUENT EMPLOYMENT OF FORCEPS.

He spoke against the growing institution of private hospitals for women, and believed that they were often no better and sometimes not as good for lying-in purposes as a room in a comfortable home. He laid down certain rules as regards

PERSONAL DISINFECTION ON THE PART OF THE OBSTETRICIAN,

strongly urging greater care in this respect. He believed that pessaries are often unnecessarily employed, and related a recent case of death following

BLOOD-POISONING PRODUCED BY ULCERATION FROM A PESSARY

introduced in 1860.

DR. WM. H. COGGESHALL, of Richmond, Va., made a report on Advances in Diseases of Children, making special mention of

THE SUCCESSFUL TREATMENT OF CANCRUM ORIS WITH SUBNITRATE OF BISMUTH,

by Dr. McGuire, of New York. He described the mode of reducing congenital phimosis, when stenosis does not exist, by manipulation, as practised by Dr. Willard, of Philadelphia, and after an extended account of the present treatment of children's diseases, closed with a brief recitation of the points of relationship between membranous croup and diphtheria. The paper will appear in a future number of THE MEDICAL RECORD.

DR. MCDONALD, of West Virginia, desired that the subject of each paper should be discussed, and after an informal debate, it was decided that any member who wished could speak upon any part of the papers read.

Drs. McDonald, Parker, Hume, Field, and others discussed some of the points presented in Dr. Ellzey's paper.

In the evening DR. THOMAS H. HOWARD presented for the inspection of the Society

A LARGE NUMBER OF BONE SEQUESTRA,

weighing from half a grain to half a drachm each, which had exfoliated from the external table of the skull after fracture during a period extending over four years. The female patient from whom they were taken is now living and in good health, over fifty years of age. The doctor gave a full history of the case, which was peculiar, every piece of bone being

EXTRACTED THROUGH THE EAR.

There was no history of traumatism except that the patient received a lightning-stroke a year before the first piece of bone was discovered.

DR. ELLZEY read a volunteer paper on

THE THERAPEUTIC QUALITIES OF THE RAWLEY SPRINGS WATER,

stating that the peculiar chalybeate water of this spring was not duplicated anywhere else in America, the only localities where a like combination can be found are at Schwalbach and Tunbridge Wells in the Old World. He gave a clinical report of a number of cases of depraved and impoverished blood conditions relieved and cured by the use of this water.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 27, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from p. 249.)

DR. FERGUSON presented a specimen of

ANEURISM OF THE HEART.

The patient was a male, fifty-four years of age, a native of Ireland, married, and a clerk by occupation. Both his parents lived to old age, although his mother was troubled with asthma for many years. He was quite well until April, 1882, when he began to suffer from shortness of breath, and at times cardiac palpitation. These symptoms, however, were not severe until one month previous to his admission into the New York Hospital on the 31st of March, 1883. Then he became quite weak, his feet began to swell, and he passed but a small amount of urine. He suffered from severe dyspnœa, cardiac palpitation, irritability of the stomach, and ocular disturbance, together with a cough accompanied by a frothy mucous expectoration. He gave an alcoholic history. On admission he was fairly nourished, feet and legs œdematous, cardiac action and respiration labored. The heart-sounds were roughened, but there was no bruit. He was passing twelve to sixteen ounces of urine a day.

Under treatment the first few days in the hospital his condition improved. Later on in the month of April he complained of great weakness, his respiration being much embarrassed and his legs, scrotum, and penis very œdematous, his abdomen was also distended with fluid. Stimulants and diuretics gave him only temporary relief.

The first week in May he was aspirated, sixty-three ounces of fluid being removed from the peritoneal cavity. After respiration his breathing was much relieved and he was passing at the time twenty-five to thirty ounces of urine a day. His dyspnœa continued at times slight but occasionally very severe. On the 17th May he was again aspirated and 108 ounces of clear serum drawn from his peritoneal cavity, without any relief to his respiration or heart action. He was delirious at times and suffered greatly from dyspnœa. His heart action was weak and irregular, ranging from eighty to ninety beats in a minute, his respiration forty to fifty, and his temperature 99°, or normal. The urine contained considerable albumen and tube-casts of the granular and epithelial variety.

At the post-mortem examination there were 3,400 c.c. of clear serum in the pleural cavity. There was no evidence of peritonitis. In the right pleural cavity there were 1,350 c.c. and in the left pleural cavity 1,300 c.c. of clear serum. The kidneys are not much reduced in size; their capsules are not adherent; their surfaces are smooth except the presence of a few small cysts. The organs in the recent state were much congested. The markings were obscure and the epithelium lining the convoluted tubules throughout, and the straight tubules in places, had undergone fatty metamorphosis. There were many atrophied glomerules, and thickened vascular walls, as well as tube-casts both in the cortical and medullary portions of the organ. The heart is large; all its cavities, especially its left ventricle, are dilated. The left ventricular wall is hypertrophied, except anteriorly near the apex, where it is very thin and made up almost entirely of fibrous tissue.

In this location the ventricular wall is about one-fourth of an inch in thickness, and is lined by a clot of fibrin firmly adherent to the wall of the heart and is similar to the clots found in aneurisms. The endocardium of both ventricles is thickened, and the left ventricular wall throughout contains a great deal of fibrous tissue. The interventricular septum is normal. The muscular fibre of the heart on microscopic examination did not contain fat.

DR. GERSTER presented the uterus and appendages removed from a woman thirty-seven years of age, who had suffered for about one year from profuse menorrhagia and continuous metrorrhagia. The patient had never been pregnant, but had been married four years. She had not reached the menopause. The menorrhagia and metrorrhagia were believed to be due to uterine fibroids. Her general condition became seriously reduced, and at times she was so weak that upon slight exertion she would faint. All the ordinary means had been resorted to for producing involution of the fibroma without avail. Finally Dr. Tauszky, under whose care the patient had been, kindly referred her to Dr. Gerster, and on examination he found in the median portion of the abdominal cavity a hard, solid tumor, about the size of the uterus in the seventh month of pregnancy, freely movable in all directions, and smooth over its entire surface. There was evidence of a slight amount of ascites. From abdominal palpation and the fact that the vaginal portion freely followed movements imparted to the tumor, it was thought probable that the swelling occupied the uterus itself. The ovaries were not detected by palpation. It was evident that the woman would soon die unless relieved in some way, and it was determined to give her a chance by attempting to remove the tumor entirely by the abdominal section. Accordingly, after preparatory treatment, the operation was performed on June 7th. The preparatory treatment consisted in the use of laxatives with rectal and the methodical use of vaginal injections of an antiseptic fluid. The patient was etherized and a small incision made in the abdominal wall somewhat below the umbilicus and in the median line. The tumor at once presented itself, and on introducing the fingers into the abdominal cavity the ovaries were readily felt attached to it. The neck of the uterus was found rather slender, and Dr. Gerster thought it would not be difficult to secure it as a pedicle; the tentative incision was therefore extended upward to two and one-half inches above the umbilicus, with a view to everting the tumor as rapidly as possible, and then close at once temporarily the upper part of the incision by silver-wire sutures, leaving an opening in the abdominal wall only sufficiently large to enable him to treat the neck of the tumor, thus guarding against the protrusion of the intestines. An elastic ligature was thrown about the broad and round ligaments and the tube. Another elastic ligature was applied centrally toward the uterus, and the intervening tissues were divided by the actual cautery. This was done on both sides. Having thus secured the vessels leading to the tumor he placed an elastic ligature about the neck of the growth itself and clamped it with lead. The tumor was now cut away at some distance above the ligature with a small amputating knife. His first idea was to strip up the peritoneum and to place an elastic ligature beneath it, but the pedicle was so small that he decided to treat it like the pedicle of an ovarian tumor. The cut surfaces were seared with the thermo-cautery, iodoform was dusted over the stump, and the pedicle was dropped into the abdominal cavity. Except the blood which was lost from the tumor itself, not a drop of hemorrhage occurred save that from the external incisions which was exceedingly slight as it was promptly controlled. No blood whatever entered the peritoneal cavity. The tumor having been removed, and the pedicle treated, the temporary sutures in the abdominal walls were removed, the edges of the peritoneum stitched together by a continuous catgut suture, the edges of the abdominal incision brought together by deep silver sutures, and the ordinary antiseptic dressing applied. The patient's pulse, which before the operation was rather weak, varying from 90 to 96, rose to 108 during the operation, and, after the anæsthesia ceased, to 116 to 118, and remained at this high rate. She complained from the very first, after coming from under the influence

of the anæsthetic, of extreme thirst, which Dr. Gerster regarded as a very ominous symptom. The temperature was normal up to a few hours before death. The patient did not at any time complain of pain, and there was no tympanites; up to twelve hours after the operation there was no nausea or vomiting, but subsequently nausea was present until death occurred. The patient died in collapse with a thready pulse, but no pain whatever, the respirations remaining normal nearly to the end. At the autopsy the abdominal incision was found nearly in a normal condition, union by first intention had occurred throughout except at the lower angle, where about three drachms of purulent fluid had collected. The incision through the peritoneum had completely healed by first intention. The bowels were found in the same collapsed condition that they were in at the close of the operation. The peritoneum itself was normal. The pedicle was absolutely unchanged. The ligature which had been applied to it was in the position in which it was left. There was no evidence whatever of inflammatory process within the abdominal cavity. The uterus, containing a large fibroid tumor, together with the pedicle, altogether weighing seven pounds, the cervix, and a portion of the vagina were presented. Dr. Gerster believed that death was due to the anæmic condition of the patient, and the shock of the operation probably hastened by the otherwise not high fever due to suppuration of the external wound. He believed that the formation of the purulent fluid which was found at the lower angle of the abdominal incision was due to septic infection; for complete antiseptic precautions had been taken, all instruments and utensils used had been disinfected, also the hands of all the assistants and of the nurses; but he was convinced that while he was closing the external incision some fault in the management of the sponges must have been committed. It was in the external incision that the suppuration occurred, as shown by the autopsy, either the sponges or the hands of the nurses who assisted at this stage of the operation, or both, had not been rendered antiseptic.

The Society then went into executive session.

AMERICAN DERMATOLOGICAL SOCIETY.

Seventh Annual Meeting, held at Lake George, August 29, 30, and 31, 1883.

WEDNESDAY AUGUST 29TH—FIRST DAY—MORNING SESSION.

THE Association met at the Sagamore House, and was called to order at 10.30 o'clock by the President, DR. R. W. TAYLOR, of New York, who welcomed the members with a few appropriate remarks and then proceeded immediately to the scientific business.

The first paper was read by DR. H. G. PIFFARD, of New York, on

THE TREATMENT OF ACNE.

The term acne was restricted to inflammatory affections of the sebaceous glands. This affection never begins, and relapses never occur, without sufficient cause, and the first indication is to seek for and, if possible, remove the etiological factor, whether gastric, intestinal, uterine, etc. It is only partly true that it is an incurable disease. It is subject to repeated relapses. It can be cured temporarily quite easily; its course may be aborted and often shortened. Dr. Piffard then related the history of a case occurring in a patient who suffered from ovarian trouble, the removal of which was followed by a cure of the acne. He also referred to a case of chronic incurable organic uterine disease in which a severe acne existed that persisted despite treatment, and stated that in such instances all that could be reasonably expected was temporary alleviation.

Acute acne vulgaris.—The drug which he had administered internally with the most satisfactory results was the calx sulphurata, in small doses to be discontinued as soon as good effects are manifested. Next in efficacy was the bromide of arsenic in doses of from $\frac{1}{100}$ to $\frac{1}{60}$ of a grain—a one per cent. alcoholic solution administered in doses of from one to two minims (not drops) in a wineglass of water upon an empty stomach. As the acne improves lessen the doses. He had found the former drug most serviceable in the lymphatic variety and the latter in acne of the florid type. External treatment: depletion by incision and bathing with warm (not hot) water; in simple cases puncture the papules, and puncture each fresh papule as it appears. The next external application recommended was frequent bathing with *very hot water*. In the pustular variety the pustules should be punctured, the contents squeezed out, and the parts bathed with *hot* water to reduce the congestion. Other external applications mentioned were soothing agents, such as belladonna and stramonium—belladonna liniment mixed with benzoated lard, sometimes ammoniate of mercury; fluid extract of stramonium, made from fresh leaves gathered in the autumn, incorporated in benzoated lard in the proportion of ʒ j. to ʒ j.

Subacute acne vulgaris.—Internal treatment by the use of calx sulphurata, but in much larger doses than in the acute form, and continued until the physiological action of the drug is manifested by increased activity of the eruption, perhaps by increased number of the lesions, and perhaps by a tendency to suppuration. In occasional cases he used mercury (corrosive sublimate), iodide of potassium, and ergot. In external treatment the principal indication is the employment of applications which produce an irritant or substitutive inflammation, such as green soap, sulphur, biniodide of mercury, corrosive sublimate, which act as irritants and are followed by hyperæmia with swelling, etc. When the action has reached a proper limit, discontinue the remedy and permit the parts to return toward the healthy state. The strength of these applications must be varied according to the effects produced; it is well to begin with applications of moderate strength.

The author of the paper then referred to the views of the Vienna and French schools, and to the practice of English and American dermatologists.

With regard to ergot, as recommended by Dr. Denslow, of New York, given in doses of twenty to thirty grains twice or three times a day and continued for several weeks he had seen some cases in which benefit followed its use.

Comedones.—These yield only to mechanical treatment. Remove them by pressing upon the surrounding skin, and if the sebaceous plug does not readily come out, enlarge the mouth of the duct with a fine needle.

Acne indurata, whether acute or subacute, may be regarded as an aggravated acne vulgaris, and the principles of treatment are substantially the same as in acne vulgaris. The most striking results he had seen follow the use of ergot had been in this form of the disease.

DR. ATKINSON, of Baltimore, had used the sulphide of calcium faithfully, but had failed to obtain the favorable results, which from time to time had been reported. He had used ergot, but also without noteworthy benefit. Whatever of benefit he had obtained had been by the use of local applications, together with such remedies and measures as were indicated to correct or remove those disorders, gastric, intestinal, uterine, etc., which were generally supposed to be causes of this local inflammation.

DR. VAN HARLINGEN, of Philadelphia, had used with considerable benefit, in eight or ten cases of *comedones*, the following smeared over the elevations: Officinal acetic acid, two parts; glycerine, three parts; and kaolin, four parts.

DR. W. T. ALEXANDER, of New York, had used calx sulphurata with considerable benefit, but usually only in the pustular variety. On the other hand, he referred to a case in which the remedy, administered in small doses four times a day, exhibited lack of power to arrest sup-

puration. The only good effect he had seen follow the use of ergot, was a seeming diminution of the redness, but only so long as the drug was being taken.

Dr. Sherwell, of Brooklyn, did not employ the sulphide of calcium. He had obtained sufficiently good results by the use of external applications with the use of internal remedies, especially ergot. He had found cannabis indica of great benefit in acute forms of the disease tending to the pustular state. He associated acute pustular acne with menstrual disturbances very decidedly, and always employed ergot—moderately during the period, more pronounced between the periods, especially just before and just after the occurrence of one. He could speak with certainty of the beneficial effects produced by this drug in this form of acne occurring in females, and had thought benefit followed its use in males. In the rosaceous form of acne he had found ergot especially beneficial. He regarded its use as empirical, in all probability; at least, did not accept Dr. Denslow's views that it acts upon the muscular tissue of the skin.

Dr. Graham, of Toronto, had found calx sulphurata useful in suppurative diseases, whether acne or the formation of abscess.

The President said that the interest in the paper centred upon the more or less importance of local and constitutional treatment. He wished to again put on record his belief that *curative* influence is exerted only by local measures, and that internal treatment is merely subsidiary. As regards the reciprocal relations between acne and uterine affections, he had not yet reached any definite conclusions. That they existed at the same time in the same patient was well recognized, but he had not yet become satisfied as to whether the acne actually was caused by the uterine disorder.

In the treatment of acute acne he had placed great reliance upon alkalies and diuretics; one or two drachms of Rochelle salt with thirty grains of the acetate of potash in a wineglass of water three times a day. In the hyperæmic form he always obtained benefit by this medication, and also in the indurated variety. Besides puncture, recommended by Dr. Piffard, he had been accustomed to apply liquor hydrarg. pernitratis—one to eight of water—once or twice a day. He had also used with marked benefit, in that form, also accompanied with rosacea, one-half ounce of chrysarobin to one ounce of flexible collodion; pencil the patches. The use of this remedy necessitates sequestration of the patient for some time. He had also obtained benefit in the treatment of acne indurata by the use of Donovan's solution, pushed until ten or twelve drops are taken at a dose, three times a day.

In his hands ergot had not cured a single case. It relieves the hyperæmia but has no effect upon the induration. In the various forms of acne he had obtained the most gratifying results from the use of mercurial ointment —one to eight of vaseline—or ointment of biniodide of mercury.

Dr. Stelwagon, of Philadelphia, had obtained good results from the use of a lotion composed of sulphate of zinc, 3 j.; sulphuret of potash, 3 j.; water, ℥ iv.

The President and Dr. Sherwell had used this lotion with good results. The President had used an ointment of iodide of zinc, five to thirty grains to one ounce of vaseline or lard, with excellent results.

Dr. Graham, of Toronto, then read a paper on

GENERAL EXFOLIATIVE DERMATITIS.

The author of the paper first directed attention to the significance of the term, and then made brief allusion to the literature of the subject. He had collected thirty-four cases, of which eleven terminated fatally, ten recovered entirely, and in seven the recovery was partial or the result was not known. In eight cases the disease ran an acute course, not lasting longer than a few weeks, and in twenty-five it was chronic, lasting for months or years. He had had under observation four cases, two of which were of a chronic character, and two were acute and recurrent. In the third case the seizures occurred at various seasons of the year, and in the fourth case the first three took place in summer and the fourth in March. In both the disease ran a very similar course, except that in the latter there was at the beginning a vesicular eruption, whereas in the fourth no such lesion occurred.

It is probable that many cases of general exfoliative dermatitis have been mistaken for scarlet fever. The principal features of the disease may be considered under three heads: (1) general hyperæmia; (2) general exfoliation of the epidermis; and, (3) severe constitutional symptoms appearing at various times throughout the attack, and in many instances a tendency to a fatal result. In some cases preceding the hyperæmia and exfoliation there is a serous exudation. From his observations, the author of the paper agreed with Dr. Baxter and Dr. Jamieson in the opinion that the term general exfoliative dermatitis may be applied to all the cases which are generally described under the names pityriasis rubra, and pemphigus foliaceus, as well as to other cases which cannot be classed with either. There are two principal sub-divisions of the affection: 1, acute; 2, chronic. Of the latter there are two varieties: (1) in which hyperæmia and exfoliation exist, and it might be called dermatitis exfoliatum rubrum; (2) in which a serous exudation, in the form of bullæ, precedes the exfoliation, and this might be called dermatitis bullosa et exfoliatum. The former variety would include pityriasis rubra and the latter pemphigus foliaceus. The acute form, although often single, has a strong tendency to recur, influenced by season or outward circumstances. The recurrences may be accounted for from individual peculiarities.

Dr. Hardaway, of St. Louis, had under observation one case of five years' standing, which manifested some improvement under the internal use of the tincture of iron; all other methods of treatment having failed. He had seen one quite acute case; another occurring in an infant; another occurring in a young lady, of neurotic family, and since the attack she had suffered during the last seven years from frequent occurrences of bright hyperæmic spots, varying in size from that of a silver dollar to that of the hand, exceedingly hot and throbbing to the touch, and *without* exfoliation.

Dr. Atkinson, of Baltimore, thought it impossible to describe a distinct disease that could be called pityriasis rubra. Again, it was desirable to find some name to apply to certain cases, and he thought general exfoliative dermatitis was as good as any, perhaps. He believed that there is a very wide range in these cases, but that the disease always depends upon trophic neuroses, the nature of which we do not understand. Some cases answer to pityriasis rubra; others give patches which are undoubtedly eczematous; and then there are chronic cases of exfoliative dermatitis. He regarded it as important to remember that the skin of certain individuals manifests a marked tendency to become inflamed as the result of the internal use of certain drugs; for example there is a well-marked eruption produced by quinine.

Dr. G. H. Fox, of New York, approved of what Dr. Atkinson had said concerning the advisability of including all forms of dermatitis under the general name, and thought it was fallacious to endeavor to make a differential diagnosis clinically. As to pityriasis rubra and eczema, however, he believed there were reasons for making a distinction, and, in many of the cases of general desquamation which are spoken of as exfoliative dermatitis, there is an eczematous process which involves the mucous layer of the skin, and is not a disease of the vascular supply or a primary disturbance of the nervous system, as is pityriasis rubra. He thought Dr. Graham had done well in associating the acute and chronic cases.

Dr. P. A. Morrow, of New York, believed the disease to be neurotic in character, and in two cases had seen decided benefit produced by arsenic.

Dr. Sherwell thought an exception should be made with reference to pemphigus foliaceus, as it was sufficiently distinct in character still to be entitled to retain its original name. He accepted Dr. Graham's first division, but not the second.

Dr. Piffard thought there were three quite distinct affections: (1) pemphigus foliaceus; (2) pityriasis rubra; (3) dermatitis exfoliativa. He admitted that it was sometimes difficult to make a differential diagnosis, but that fact could not be used as an argument in favor of a general name.

Dr. Graham said he had doubted the propriety of placing pemphigus foliaceus under the head of general exfoliative dermatitis, but at the same time the two conditions had so many features in common that he had ventured to do so.

The President regarded the further study of the three affections mentioned by Dr. Piffard as very important. He then called attention to two cases. The first occurred in a woman thirty years of age, a widow, the mother of one child, and a sufferer from chronic malaria, who had *fifteen* attacks, produced by taking either quinine, cinchonine, or elixir of calisaya. The second case occurred in a boy nineteen years of age, who had been under observation five months. The patient had been exhibited to the New York Dermatological Society, and a history, so far as then given, had been published in the July number of the present year of the *Journal of Cutaneous and Venereal Diseases*. The interest in the case centred in the question whether or not the condition of the skin depended upon syphilis. It was the most remarkable case of exfoliative dermatitis he had ever seen, and was surrounded with grave doubt concerning its etiology. Dr. Taylor's description of the case was accompanied by several photographic illustrations.

Dr. Stelwagon, of Philadelphia, then read a paper on

IMPETIGO CONTAGIOSA.

The author of the paper first referred to the individual nature of this affection, and the correctness of the views advanced by Tilbury Fox. He believed there was no evidence that the disease is in any way related to ringworm; also that it does not follow contagious pustular affections as claimed by Dr. Hyde, of Chicago; further that a pustular disease cannot be modified by a contagious disease; nor, in case that such a modification might be produced that the modification could propagate itself. If the disease is not a modification of some other affection the conclusion must be reached that the process is an independent one, and the individuality of the disease must be admitted. The eruption has contagious properties. He doubted the truth of the idea that it is of fungous nature. In five hundred microscopic examinations he had been unable to find the fungus described by Dr. Piffard except in three instances, and regarded the fungi when found as in all probability adventitious. The view that the affection is a general systemic disease with cutaneous manifestations seemed to him to be the most tenable that could be offered. This view is sustained in a measure by the writings of Tilbury Fox, and there are several reasons which support the theory. Aggregated experience proves the existence of prodromic symptoms, and ordinarily it runs a short but definite course. The eruption is auto-inoculable, which explains the existence of new patches. There are several facts which are against the supposition that the disease follows vaccination. The author's conclusions were: 1, that it is a separate and distinct disease; 2, that it is not parasitic; 3, that it is not related to vaccination; and 4, that it is an acute systemic disease with cutaneous manifestations and probably due to a specific poison.

Dr. Hardaway regarded the fact that the disease occurs epidemically as a strong argument in favor of its being an independent affection.

Dr. Atkinson felt very uncertain concerning the individual nature of the disease.

Dr. Rohe, of Baltimore, did not recollect that he had seen a case during the last two years. That the pus of impetigo contagiosa is inoculable he was quite sure; that it is inoculable upon healthy individuals; and that successive inoculations become weaker. He had been unable to find a fungus. That it is an independent disease he was moderately certain; but that it is found only after contagious diseases and in individuals who are not in good health, as suggested by Dr. Hyde, he did not believe, yet what the exact nature of the disease is he did not know.

Dr. G. H. Fox thought all would agree that the pus is inoculable, that it does not depend so much on the character of the soil as on the character of the pus; and that the peculiar pustules which result are not to be classed as pustular eczema. He thought Tilbury Fox was unwise in giving the affection a new name. He had generally studied it as a disease of the skin; but regarded the suggestion that it is constitutional as worthy of attention. Dr. Fox was also inclined to doubt the proposition that it has no connection whatever with vaccination; but exactly what the relation is he was unable to say. With regard to pediculosis, it might not produce an eruption, but certainly it would cause the spread of one.

Dr. Graham had always regarded impetigo contagiosa as a distinct disease, and was inclined to agree with Dr. Stelwagon concerning its nature.

Dr. Piffard preferred to go back to the old name. He had a series of cases in different families, and in every instance the first in each series appeared shortly after vaccination, and the other cases followed. As to its parasitic nature he was still inclined to hold to that view, although no one had found a definite parasite in the vesicle; fungi had been found in the crusts only, and several who had found fungi had found different ones. He found, at the time he made his observations, a permanent fungus, the same as he found in vaccine, and similar ones have not been described in connection with any other form of disease. If it was a common crust fungus he should be forced to give up the connection of the disease with vaccination. A point in favor of its parasitic nature is the fact that it is cured so readily with parasiticides. He had not regarded it as a self-limited disease, but thought the explanation given by Dr. Stelwagon was a very ingenious one.

The President was a firm believer in the individuality of the disease. He could not regard it as a systemic affection. The existence of a prodromal fever was exceedingly doubtful. In sixty cases he had observed, the disease began locally about the face or nails in every instance, and afterward different parts of the body were inoculated. He thought the systemic reaction could be easily explained by the existence of an eruption. He believed it spreads by immediate contagion. He believed the disease originated in some form of pus which lodges upon the skin, then develops a pustule, and from this it is communicated to others, or to other parts of the body.

Dr. Fox had had cases which did *not* yield *readily* to treatment, and had remained obstinate for two or more weeks.

Dr. Stelwagon said that sometimes several weeks were required to get rid of the disease.

Dr. Rohe said he did not wish to endorse the view that the disease is systemic, the same as scarlet fever, etc., but simply wished to say that he regarded it as inoculable locally.

Dr. Hardaway had not seen the disease associated with vaccination.

The Association then adjourned to meet at 8 P.M.

WEDNESDAY—FIRST DAY—EVENING SESSION.

The Association was called to order at 8 P.M. by the President.

DR. ATKINSON, of Baltimore, then read a paper entitled

A CASE OF MULTIPLE CACHECTIC ULCERATION.

The case occurred in a female child, mixed white and black, without any evidence of syphilis, and the effect of mercury, ergot, and scurvy, as well as diabetes, could be excluded. The symptoms summarized were, papillation, vesiculation, followed by superficial destruction of tissue and progressive ulceration which destroyed all the tissues, even the bones. At no point did gangrene in mass occur. It was not entirely symmetrical. Motion and sensation were impaired, but there was not complete paralysis of either. There was no evidence of itching or pain. Distinct symptoms of vaso-motor disturbance were not observed. Dr. Atkinson thought there could be no doubt that his case belonged to the group named by Oscar Simon multiple cachectic gangrene, and that it was one of the trophic neuroses.

DR. VAN HARLINGEN reported a case of trophic neurotic gangrene occurring after amputation of the thigh.

THE PRESIDENT reported two cases seen with Dr. W. H. Draper, at the clinic at the College of Physicians and Surgeons. The first was a puny child, six months old, that had an ulcer upon the back which began as a water-blister. Despite treatment it extended and became very large, destroying the skin down to the muscles. Under generous diet and tonics it ultimately recovered.

The other case occurred in a woman thirty years of age, married, who had never had children, and never had taken ergot. She came with each finger on both hands in a bluish congested condition, but no bullæ existed. There was swelling of the tip of the nose and upon it was a bulla, which broke down into an ulcer, involving all the tissues down to the cartilages. The patient lost fully one-half of every finger, the thumbs escaping. She finally recovered. The only etiological factor that could be reached was excessive indulgence in buckwheat cakes.

EXPERIMENTS IN THE USE OF NAPHTHOL.

DR. VAN HARLINGEN read a paper with the above title, in which he gave the conclusions reached by Kaposi, who introduced the use of the remedy, together with a commentary containing his personal experience in its use. He had found it of great service in scabies, also of some value in the treatment of psoriasis. In parasitic skin diseases naphthol is of but little use, while in eczema and hyperidrosis it is entirely without value.

DR. FOX had used the remedy externally in almost every case where he could possibly employ it, and had become convinced that it falls far short of taking the place of tar. In a few cases of eczema of the scrotum and anus he had obtained very satisfactory results from the application of a five per cent. ointment. For psoriasis of the scalp and face the ordinary white precipitate ointment had served most satisfactorily.

DR. WIGGLESWORTH, of Boston, thought Kaposi did not use naphthol as much as formerly. His own experience corroborated that of Dr. Fox.

DR. HARDAWAY had found it very much inferior to chrysophanic acid in psoriasis and eczema. In the fissured and squamous eczema of the palms of the hands and fingers he had used a fifteen per cent. ointment with good success.

DR. STELWAGON thought it inferior to white precipitate ointment for psoriasis of the scalp; regarded it as very efficient for scabies, and was of the impression that it is now scarcely used in Vienna except in the treatment of this affection.

DR. PIFFARD regarded naphthol as a dangerous remedy.

THE PRESIDENT had used it with good results in scabies, but in psoriasis it had proved inefficient.

DR. G. H. FOX, of New York, then read a communication, entitled

A TRIP TO TRACADIE (LEPROSY),

together with propositions submitted jointly by himself and Dr. Graham, of Toronto. Tracadie is in New Brunswick and has a lazaretto where lepers reside. During this summer he had visited the place, and so also had Dr. Graham, of Toronto, under the direction of the Dominion Government. The lazaretto has at present 24 inmates, 11 males and 13 females, and is under the charge of Sisters of Charity. The disease as seen was partly of the tubercular and partly of the macular variety, and there were three cases which were not leprous. Some of the cases showed a peculiar skin disease that appeared to be syphilitic in character, although there were no marked lesions of syphilis. As to the white scales, so often referred to, he was struck with one fact, namely—that both forms showed shining silvery scales, very much as found in psoriasis, except not having the peculiar circumscribed form. Many of these patients had papular eczema, which gave them much annoyance. Most of the patients, with the tubercular form especially, presented marked ulceration of the hard palate; in one case there was perforation. Many of the cases presented a well-marked form of dactylitis, without the suspicion of syphilis, but with enlargement of the bones of the toes in one case. Those who had ulceration of the hard palate had also laryngeal trouble, either the peculiar wheezing or complete aphonia. The following were the propositions submitted as a joint communication by Drs. Fox and Graham:

First.—Leprosy is a constitutional disease, and in certain cases appears to be hereditary.

Second.—It is undoubtedly contagious by inoculation.

Third.—There is no reason for believing that it is transmitted in any other way.

Fourth.—Under certain conditions a person may have leprosy and run no risk of transmitting the disease.

Fifth.—It is not so liable to be transmitted to others as is syphilis in its early stages. There is no relation between the two diseases.

Sixth.—Leprosy is usually a fatal disease, its average duration being from ten to fifteen years.

Seventh.—In rare instances there is a tendency to recovery after the disease has existed many years.

Eighth.—There is no valid reason for pronouncing the disease incurable.

Ninth.—Judicious treatment improves the condition of the patient, and often causes a temporary disappearance of the symptoms.

Tenth.—There is a ground for the hope that an improved method of treatment will in time effect the cure of leprosy, or at least that it will arrest and control the disease.

DR. FOX admitted that he had yet to cure his first case, but he did not believe that leprosy is an incurable disease. The treatment adopted in the New York Hospital, consisting in the use of chaulmoogra oil, and large doses of nux vomica, had afforded a degree of success, and he read a letter received from a patient which showed that the disease in his case had at least been non-progressive for some time.

There is no evidence that either physicians or nurses have acquired the disease by attendance upon those affected with it.

DR. D. B. SIMMONS, who had had a large experience in the treatment of this disease in Japan, was invited to open the discussion. He thought it exceedingly difficult to study leprosy in lazarettos. According to his observation, and the view is fully recognized by the Japanese, the disease manifests itself *first* in the face, and by a peculiar blushing or lividity of the features, especially after taking wine, etc. The development of this peculiar

appearance is at once sufficient to drive the person immediately into exile. Next the anæsthetic symptoms usually are most prominent, anæsthetic spots, without any other manifest change in the condition of the skin or existence of other symptoms of the disease. Then the disease shows itself sometimes upon the ears, sometimes elsewhere, with exacerbations at times, sometimes with fever, bleeding from the nose, etc. His own opinion was that it is decidedly hereditary, but it is exceedingly difficult to reach facts bearing upon this question, because of the prompt exiling of any member of the family who develops the first peculiar symptoms, and subsequent denial that the disease ever existed in the family. He did not regard it as either contagious or infectious, and it is not regarded by the Japanese as contagious. The duration of the disease is exceedingly variable. He had never succeeded in curing a case, nor had he seen a case that had been cured, but almost without exception every patient might be benefited by treatment. Strict attention to hygiene, diet, and cleanliness, aided by the internal and external use of copaiba had yielded the most favorable results he had obtained.

Dr. Rohe said that, if the disease *is* spread by contagion, there is a marked difference in the susceptibility of different persons to its influence; a much more marked difference than exists with reference to any other contagious disease.

Dr. Wigglesworth had studied the disease in Norway and Spain as well as in the East, and could corroborate Dr. Fox's views concerning the non-communication of the affection to physicians and nurses. His view was, that while it is inoculable, it is but faintly, if at all, contagious, and not at all infectious. Nor did he see anything in the direction of *white patches* to suggest the existence of the disease.

Dr. Graham regarded the disease as inoculable and infectious. He was also inclined to believe that the disease is hereditary, although no case in Tracadie confirmed that belief. He had noted a decidedly marked difference in susceptibility of different persons, as illustrated by one family especially in Tracadie.

Dr. Piffard accepted the ten propositions. He also referred to one instance in which a physician took the disease and died of it. He thought it was utterly impossible to determine in any given case whether the disease is due to heredity or to infection.

Dr. Sherwell, of Brooklyn, then read a paper on

PAGET'S DISEASE, OR MALIGNANT PAPILLARY DERMATITIS.

He had had two cases, and these with those recorded by Paget, Butlin, Morris, Thin, and Duhring made 27. He had recorded his first case, the first published in the United States, in the January number of the *Journal of Cutaneous and Venereal Diseases*. The author of the paper gave the following conclusions:

First.—The subjective symptoms, itching, burning, are those of an eczema, and not those of an ordinary carcinomatous affection, but they are more marked than in an ordinary case of eczema.

Second.—The objective symptoms are like those of eczema; the discharge is absolutely similar to that of catarrhal affection of the skin, stiffens linen, and forms crusts entirely indistinguishable from those of an impetiginous eczema. The color of the surface is perhaps occasionally more livid, but the border is, in his opinion, not more sharply defined than is common in that trouble. The somewhat elevated appearance of the patch simulates exactly the acutely macerated and swollen conditions of the lower epithelial layers we so frequently find in eczema. Sir James Paget compares the appearance to that of a balanitis, an apt illustration.

Third.—The disappearance of the nipple is spoken of by Henry Morris as a "melting away," a very acceptable term.

Fourth.—The "malignant papillary" feature, as described by Thin, was a marked element in his first case; much less in the second. It is a very diagnostic point, and would of itself, he thought, instantly resolve any doubts as between it and true eczema.

Fifth.—The extreme length of time may be noted in his cases, before the appearance of anything like positive evidence of carcinoma. It will be noticed that Sir James Paget gives the limit, as to this, as two years. In Dr. Sherwell's first case twelve years elapsed from attack to death, the latter event not seeming in any way connected with the skin lesion; in the second case considerable over the time mentioned by Paget had already passed.

The Association then adjourned to meet at 10 A.M., Thursday, August 30th.

THURSDAY, AUGUST 30TH—SECOND DAY—MORNING SESSION.

The Association was called to order at ten o'clock, Dr. I. E. Atkinson, of Baltimore, Vice-President, in the Chair.

Dr. Wigglesworth, in behalf of Dr. White, presented the statistical report, which was accepted. On motion by Dr. Taylor, a vote of thanks was extended to Dr. Wigglesworth for his most valuable services in performing the work which Dr. White, Chairman of the Committee, had been prevented from doing by reason of absence in Europe.

Dr. P. A. Morrow, of New York, then read a paper on

THE PATHOGENESIS OF DRUG ERUPTIONS.

Under this head are included all eruptions caused by either the internal or external use of drugs. There is a difference of opinion as to whether these eruptions should be classed among physiological or among toxicological effects. A large proportion of drug eruptions are the expression of the physiological action of the article used. The term pathogenesis is employed with reference to the close relationship which exists between physiological and pathological effects. Dr. Morrow discussed at considerable length the difficulties encountered in attempting to distinguish between the two effects, and especially when influenced by individual susceptibilities and other modifying circumstances. He then passed to a review of the theories which had been advanced in explanation of the phenomena, such as that a large proportion of these eruptions are produced by the elimination of the drug through the skin, special affinity for cutaneous structures, dynamic action of drugs, all of which had been proved to be fallacious. This was followed by a discussion of the theory of the neurotic origin of drug eruptions, which he believed best explained the phenomena in each case. The paper closed with a reference to the broad meaning of the term idiosyncrasy, as, after all, anomalous eruptions are determined by the individual rather than by the drug. The nervous element predominates in persons who have an idiosyncrasy.

Dr. R. W. Taylor then read a paper entitled,

POLYMORPHOUS CHANGES OBSERVED IN THE TUBERCULAR SYPHILIDE.

The paper was based upon a case of syphilis presenting rather early tubercular eruption, described in the books as non-ulcerative tubercular syphilide. The eruption was general, symmetrical, copious, and had the characteristics of the secondary eruption, but besides, all the deep-seated peculiarities of the tertiary eruption, so that, in order to place it in its chronological relation, it would be called what the French denominate the intermediate eruption.

The patient was a male, forty-seven years of age. Dr. Taylor gave a detailed description of the changes which took place in the eruption, and illustrated them by plates, colored upon photographs. At one period in the case, the eruption appeared strikingly like psoriasis, and subsequently the appearances of psoriasis rupioides, as illus-

trated by McCall Anderson, and maintained by Fox, a condition which might give rise to the suspicion that, what those authors had called psoriasis rupioides, is only a late form of a papular or tubercular syphilide.

The points of interest in the case were the following:

First.—Its resemblance to psoriasis.

Second.—The colloid degeneration of some of the tubercles concomitantly with the increase of the granulation tissue in others.

Third.—The degeneration of the colloid tissue into pus, and the formation of bullæ.

Fourth.—The evidence offered that true bullæ may appear in a syphilitic subject, though they result from degeneration of tissue, rather than from effusion of serum and pus, as occurs, as a rule, in simple pemphigus.

Fifth.—The development of tubercles having thick, imbricated, conical, epidermal crusts appearing like rupia.

Sixth.—In the suggestion offered by these lesions, that perhaps the psoriasis rupioides of authors is more or less dependent upon syphilis.

Seventh.—The formation of true rupia crusts from the bullæ above spoken of.

Eighth.—The fact that the non-ulcerated tubercular syphilide may be the starting-point of severe and extensive gummatous infiltration.

Dr. Hardaway related the history of a case of psoriasis rupioides, as described by McCall Anderson, occurring in a non-syphilitic patient. The only departure from the appearance of ordinary simple psoriasis was the heaped-up condition of the scales. The mother of the patient had ordinary psoriasis vulgaris.

Dr. Atkinson remarked that Dr. Taylor's paper was also interesting as showing the power of syphilis to assume nearly all phases and simulate almost all diseases.

PSEUDO-PSORIASIS OF THE PALM.

Dr. Sherwell read a paper on the above subject, in which he said that in using this title he inferentially and necessarily included those lesions invading the structures anatomically analogous, the plantar surfaces. As to whether a psoriasis, pure and simple, ever occurs in the regions named, he had steadfastly maintained the negative.

In conclusion, he would say that he believed a squamous eruption upon the palms (excluding eczema, etc.), resembling psoriasis, always to have a syphilitic diathesis for its base, or one of its bases, and to be *prima facie* evidence thereof. He did not think, however, that if it could be decided, any great change in the general treatment would be effected, but he did believe that an eruption of this nature, in this location, would always in the physician lead him intuitively to the employment of Donovan's rather than Fowler's solution. But even here again the result of treatment would evidently not be diagnostic proof. Dr. Sherwell had seen one case, presented to the New York Dermatological Society by Dr. Bulkley, which almost convicted him that his belief was erroneous, but several of the members expressed grave doubt concerning the absence of syphilis. Dr. Sherwell then gave the history of a case.

Dr. W. T. Alexander, of New York, then read a paper on

PSORIASIS AFFECTING THE PALMS,

in which he gave the histories of three cases of the disease occurring in non-syphilitic patients. The paper was illustrated by photographs. Discussion on these two papers was opened by Dr. Graham, who reported two cases of psoriasis of the palms, the only ones he had ever seen, occurring in non-syphilitic patients.

Dr. Morrow stated that while psoriasis is extremely rare upon the palms, and while it probably never occurs independent of its development upon other parts of the body, yet clinical facts prove that it may develop upon the palms. He had seen a number of cases of psoriasis of the palms in non-syphilitic patients.

Dr. Taylor saw the three cases reported by Dr. Alexander, examined the patients, but was unable to find any evidence of syphilis. He had not seen psoriasis of the palms or the body that did not exhibit psoriasis of the nails first. That simple psoriasis can affect the palms he thought there was no doubt. He thought, however, that it had never been seen confined to the palm.

Dr. Morrow had seen a case in which the disease was confined to the palm.

Dr. Alexander said he had been struck with the evanescence of psoriasis of the palm, and perhaps that was the reason why it was seen so rarely upon the palms. He cited a case in which it appeared and disappeared within a few days without treatment.

Dr. Sherwell said that to prove negative was far more difficult than to prove positive syphilis, and congenital syphilis also formed a part of his theory concerning psoriasis. He had seen simple psoriasis, and then the patient contracted syphilis, and soon afterward psoriasis of the palms developed so repeatedly that he must still believe palmar psoriasis has a syphilitic basis. It might be that the syphilis gives the psoriasis a change, so that it appears in the palms; that view he was prepared to accept.

A paper entitled

A STUDY OF THE COINCIDENCE OF SYPHILITIC AND NON-SYPHILITIC AFFECTIONS OF THE SKIN,

and sent by Dr. Hyde, of Chicago, was read by Dr. Wigglesworth.

The more precise and exact the study of the symptoms in syphilis, the more clearly will be recognized two facts which are strictly related: 1. Syphilis much more resembles other diseases in its career and its subjection to accidental influences than has been commonly supposed and taught. 2. When syphilis precedes, coexists, or follows other pathological conditions, its unity is preserved, and it rarely undergoes itself, or induces in other diseases, such a modification as distinctly changes the type of the resulting symptoms. The first statement was supported by the following propositions; the second required clinical demonstration:

(*a*) Allowance being made for a wide field of distribution of its lesions, the study of one hundred consecutive cases of syphilis will convince an unprejudiced observer that such cases resemble each other as closely as do a similar number of consecutive cases of pneumonia, typhoid fever, or chronic interstitial nephritis.

(*b*) Syphilis is no exception to the general rule that the patient of greatest vigor best endures its penalties.

(*c*) Syphilis acknowledges subjection to the great accidents which commonly and evidently work changes in all disease-processes in man.

(*d*) Syphilis, like other diseases, may lurk obscurely in the system, but everything said and done, it must be betrayed by syphilitic symptoms, or we cannot admit its existence.

(*e*) Vulgar belief to the contrary notwithstanding, cases of syphilis, like those of other diseases, are readily separable into three well-known groups: (1) mild, benignant or self-limited, requiring no treatment; (2) the grave, malignant, when treatment can have little or no effect; and (3) those falling between these two extremes, where judicious treatment is capable of turning the scale in one direction and injudicious treatment in the other.

(*f*) There is no specific treatment applicable to every case of syphilis, which can be safely employed to the exclusion of all others.

In what followed the author of the paper proceeded to show how far clinical evidence supported the second of the two general propositions, that which recognizes the unity of syphilis displayed in fairly typical symptoms in the subject, who are affected with other diseases more particularly involving the skin. Varieties of suborrhœa and comedo are probably found in more frequent co-

existence with syphilis than the other disorders of secretion. Erythema, urticaria, eczema, herpes, the several forms of acne, impetigo, ecthyma, furunculus, anthrax, and the varieties of dermatitis frequently occur in subjects of an active syphilis. Herpes zoster he had not seen in a syphilitic subject. To the subject of the coincidence of psoriasis and syphilis the author of the paper directed special attention, and gave, with very great detail, the histories of two cases.

The Association then adjourned to meet at 8 P.M.

THURSDAY—SECOND DAY—EVENING SESSION.

The Association was called to order at 8 o'clock by DR. ATKINSON, Vice-President.

The PRESIDENT, DR. TAYLOR, read a paper entitled

THE PECULIAR APPEARANCE OF THE INITIAL LESION OF SYPHILIS AT THE EARLIEST PERIOD OF ITS DEVELOPMENT. [See p. 255.]

A paper by DR. DUHRING, of Philadelphia, on

THE VALUE OF A LOTION OF SULPHIDE OF ZINC IN THE TREATMENT OF LUPUS ERYTHEMATOSUS,

was read by Dr. Stelwagon. Dr. Duhring had used this lotion with marked benefit in the inflammatory superficial forms of the disease, either discreet or confluent patches, whether recent or of longer duration. He did not claim for the remedy any specific power over the disease, but in several cases it was the only remedy tolerated by the skin. The following formula for the lotion was given:

℞. Sulphate of zinc,
Sulphuret of potash.....āā grs. xxx.
Rose water..... ℥ iijss.
Alcohol..... ʒ iij.
M.

If this strength agrees with the skin, the quantity of the two active ingredients may be increased. The application may be repeated twice or more times in twenty-four hours, the skin being cleansed each time with soap.

DR. PIFFARD was astonished to hear that so many remedies had been employed in the treatment of a case of lupus, because it seemed so well settled that, in order to get rid of lupus, it must be destroyed. The methods of destroying it, which, in the majority of cases, act most successfully, are first, the use of the curette followed by cautery, frequently the actual; and second, scarification. Doubtless the lotion would benefit certain cases, but he was unable to understand how it could effect a cure.

DR. ALEXANDER had, at present, a case under treatment in which he had practised scarification three or four times, and the first operation was followed by the disappearance of one patch of the disease; but since then the only effect produced was to make the patches worse.

DR. VAN HARLINGEN said that he saw one of Dr. Duhring's cases, and certainly very marked improvement followed the use of the lotion.

Several of the members failed to see how the lotion could produce much effect on such a disease as lupus.

DR. FOX, of New York, had secured his best results in the treatment of this disease by the local application of pure carbolic acid. Paint it over the part at intervals of a week or ten days, perhaps more frequently. In three cases he had succeeded in effecting a complete cure of the disease. The frequency of the application will depend on the rapidity with which the skin peels off and leaves a smooth surface ready for another application. He had not found that it aggravates the disease at all. He had also obtained beneficial results by the internal use of phosphorus, and thought that, perhaps, a judicious use of both remedies might secure still better results than had yet been obtained by either alone.

DR. STELWAGON said that scarification aggravated the disease in Dr. Duhring's cases; that pure carbolic acid was applied without effect; and that they were benefited by this lotion only, which was applicable chiefly to the superficial variety of the disease.

DR. PIFFARD said that the dermatitis referrred to by Dr. Stelwagon and Dr. Alexander after scarification, occurred as a matter of necessity, but that it did no harm. Scarification should be performed with great thoroughness, and the dermatitis which follows is of great advantage. It is substantially the treatment recommended by Hardee, namely, to excite a sufficient amount of new inflammation to strangulate new lupus cells.

DR. HARDAWAY believed strongly in scarification and multiple puncture. He had treated one case successfully, however, by electrolysis.

A paper by DR. DUHRING, of Philadelphia, entitled,

REPORT OF A CASE OF AINHUM WITH MICROSCOPIC EXAMINATION,

was read by Dr. Stelwagon. The case was one which came under the observation of Dr. George B. Weston, of West Virginia, and to him Dr. Duhring was indebted for the specimen with the notes. Only a few cases of this disease had been reported in this country, and with reference to them the conclusion had been reached that it was caused by the application of a ligature. The patient was a negro, and the specimen consisted of one of the toes. The microscopic examination was made by Dr. Henry Wile, of Philadelphia, who examined it with great care, and reached the conclusion that the principal changes which existed were those that indicated general inflammatory condition.

DR. SHERWELL had treated many patients coming from Jamaica, San Domingo, but especially from Turk's Island, and had made inquiry concerning this affection, and had been led to the conclusion that it is due to traumatism from the application of a ligature around the toe; lazy negroes apply a ligature, and become subject to what is known as "ring-toe."

DR. HARDAWAY, of St. Louis, read a paper in which he described

A PECULIAR PAPILLARY ERUPTION.

It occurred in an otherwise healthy developed brunette upon the left cheek and both hands, and had existed at least a year, but gave no special inconvenience. The size of the papules varied from that of a grain of wheat to that of a split pea, and they were non-pedunculated. The eruption was discreet, of a dull lemon color, and of pellucid appearance. The papules were solid to the touch, gave the appearanee of having liquid contents, but nothing could be obtained by puncture, and nothing could be squeezed from the papules. The eruption disappeared under treatment, without leaving any trace whatever. He had had five cases. The treatment for the most part had consisted in the use of a tar and mercurial ointment. All the cases were chronic. There was no evidence whatever that it was contagious.

Such an eruption as described by Dr. Hardaway had not been seen by any of the members of the Association.

LYMPHANGIOMA CUTIS WITH DERMATOLYSIS.

DR. J. E. GRAHAM, of Toronto, reported a case illustrated with photographs. Mrs. L——, twenty-one years of age. When five years old a tumor appeared in front of the elbow, which gradually extended upward and downward. The history from that time had been one of constant increase, and the growth had increased very rapidly during the past year. Its presence had not produced inconvenience. On the anterior surface of the arm the integument hangs down in bag-like pouches, which changes in color as the arm hangs or is raised. The papillary layer of the corium is hypertrophied, and the skin presents deep furrows. There is brown pigmentation near the elbow, and a few black hairs exist on the surface. The entire growth has a peculiar velvety feel. There is thickening of the skin, but no induration whatever. At the middle of the forearm there is a small tumor, which feels like a mass of blood-vessels beneath the

skin. The arm can be made smaller by pressure, and especially the small tumors, of which there are two or three. The tumors are not painful. The affected arm is almost as strong as the other. It is possible that the small tumor first seen existed at birth, but had been unrecognized. Dilatation of the lymph-channels was the probable pathological lesion.

DR. FOX had seen one case which would bear comparison with Dr. Graham's.

DR. ATKINSON had seen one case which was almost identical with that reported by Dr. Graham, except that the growth was situated higher up upon the arm. He thought there was dilatation with new growth of the channels, and regarded such a case as affording striking proof of the inaccuracy of the view put forward by Dr. Formad concerning the nature of tubercle, as we do not get tubercular inflammation in these cases, where it is well known that the lymph-channels are obstructed.

DR. PIFFARD thought it practicable to remove the growth in sections by the use of the galvano-caustic ligature.

DR. ATKINSON thought the probable cause of the disease would remain, and that removal of the growth would be followed by a return of the affection.

DR. SHERWELL referred to a case of general lymphangioma.

The Association then adjourned, to meet at 9.30 A.M. on Friday.

FRIDAY, AUGUST 31ST—THIRD DAY.

The Association was called to order at 9.30 A.M. by the President.

The first order of business was the induction of newly elected officers. DR. R. W. TAYLOR, of New York, who had been re-elected President, thanked the Association for the continued honor in electing him as the presiding officer for the ensuing year, spoke of the prosperity of the Society, and the amount of good work which it had performed.

The newly-elected Vice-Presidents were Dr. Arthur Van Harlingen, of Philadelphia, and Dr. J. E. Graham, of Toronto; Secretary, Dr. W. T. Alexander, of New York; Treasurer (re-elected), Dr. George H. Rohe, of Baltimore.

The remainder of the session was devoted to the examination of microscopic sections, prepared by Dr. Henry Wile, of Philadelphia, which accompanied Dr. Duhring's paper on "Ainhum," and also illustrated Paget's disease or malignant papillary dermatitis.

The Association then adjourned to meet at West Point on the last Wednesday in August, 1884.

Navy News.

Official List of Changes in the Medical Corps of the Navy for the week ending September 1, 1883.

WALTON, T. C., Surgeon. Detached from the Powhatan, and ordered to the Naval Academy, Annapolis, Md.

SIMON, W. J., Surgeon. Detached from the U. S. S. Constellation, and placed on waiting orders after completing temporary duty as member of a Board at Annapolis, Md.

MCCLURG, W. A., Passed Assistant Surgeon. Detached from the U. S. S. Dale, and ordered to the Naval Academy.

DIEHL, OLIVER, Assistant Surgeon. Detached from the U. S. S. Constellation, and ordered to the Naval Academy.

JONES, M. D., Passed Assistant Surgeon. Ordered to temporary duty at the Naval Hospital, Washington, D. C.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 4, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 28, 1883.....	1	63	45	2	22	28	0	0
September 4, 1883	0	67	32	8	19	27	0	0
Deaths.								
August 28, 1883.....	0	17	8	1	8	14	0	0
September 4, 1883.....	1	24	2	8	1	21	0	0

CHLOROFORM NARCOSIS DURING SLEEP.—The evidence regarding this point is still accumulating. Dr. W. E. Ground, of Toledo, O., sends us a report of two cases in which he produced anæsthesia during sleep. One was in a child eighteen months old, the operation being that of the removal of a pebble from the ear; the other was in a child at the breast. The latter was apparently experimental in character.

THE BRITISH CHOLERA DOCTORS.—The twelve medical men who have been selected for service in Egypt in the cholera districts by the Foreign Office, with the advice and assistance of Sir Joseph Fayrer, will, on arrival, report themselves to Surgeon-General Hunter, M.D., and place themselves under his orders. They will be paid at the rate of £100 per month, with travelling expenses.

FLY-PAPERS.—In Prussia the sale of poisonous and arsenical fly-papers is only permitted to chemists and those who are authorized to deal in poisons. Such persons even are only permitted to sell them under the same regulations as must be observed in the sale of all poisons. These regulations require that a poison certificate be given with them, and also that the word "poisonous" be stamped on them.

A DRUGGIST SENTENCED. — Lacombe, the French wholesale druggist who was accused of fraudulently substituting sulphate of cinchonidine for sulphate of quinine, which he supplied to the Paris hospitals last autumn, has been sentenced to a year's imprisonment and fifty francs penalty, and is also called upon to pay for the advertisement of the judgment in a dozen French journals.

GRINDELIA ROBUSTA FOR ASTHMA.—Dr. Bombelon (Bergen on Rügen) recommends the smoking of cigarettes, the tobacco of which has been saturated with the resin of grindelia robusta, to asthma patients, whether they are smokers or not. The tobacco must also be well impregnated with saltpetre, which will facilitate its combustion and the development of smoke. If the patient is unable to smoke himself, the fumes are blown toward him.—*Zeitschr. d. Allg. öster. Apotheker Vereins. Ther. Gazette.*

ANOTHER MEDICAL COLLEGE.—The University of Niagara is about to start a medical department. The course of study is to be four years, and each course of lectures will continue for six months. The studies will be graded, and satisfactory examinations must be passed by the student before proceeding to a higher class. The examinations are to be conducted by a board of five medical men unconnected with the faculty of the department, to be appointed yearly by the trustees. The new college will be located at Buffalo, and the lectures will be delivered temporarily at the Hospital of the Sisters of Charity until a suitable building can be erected. The first session will begin on October 10th.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 11 NEW YORK, SEPTEMBER 15, 1883 Whole No. 671

CITY HOSPITAL

Original Articles.

NERVOUS INDIGESTION.

BY J. MILNER FOTHERGILL, M.D.,
LONDON, ENGLAND,
ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, PA.

SOME relations of indigestion connected with the nervous system may now be discussed. First, it may be well to consider reflex indigestion.

Reflex indigestion is a malady of women, for it is in women we see reflex disturbances best exemplified. We know that nausea and vomiting are the outcomes of a vesical calculus, or a pregnant uterus in the early months, or of a blow upon the testes. So ovarian irritation will often set up gastric symptoms, usually taken for primary indigestion. The ovary may be swollen and tender, or it may be fixed near the pubic brim by adhesions. When in front there is pain on emptying the bladder; when on the side, especially the left side, there is pain on emptying the bowels. From this centre may radiate disturbances of many parts. The extreme frequency of reflex dyspepsia from a tender ovary on the one hand, and the great neglect of the condition in medical literature on the other, must be my explanation for going into this subject somewhat fully.

The patient is usually a comparatively young woman with pallor in her features and general anæmia; but by no means necessarily so. Her complaint is of indigestion coming on soon after taking food, often with nausea and loss of appetite, less frequently with actual vomiting. Yet the tongue is clean; sometimes it has a slight coating; rarely is there any rawness or approach to the bare tongue of gastric irritability. The tongue puts the experienced observer on his guard. Pressure is made over the region of the ovaries, and when it is made over the tender ovary pain is produced—a sickening pain, giving a feeling of faintness, and reflected in the patient's features. Usually she asks to sit down. In a well-marked case the following symptoms, sometimes a few only but often all, are manifested, much depending upon the patient's intelligence and readiness to answer: First, then, if there be pain produced on defecation, there will be reflex constipation, the pain inhibiting the vermicular action of the bowel. Then there will be found "pain under the heart" as women term it. This is intercostal neuralgia with the three tender spots of Valleix, one at the left apex, a second at the outer edge of the left scapula, about the middle, and a third at the foramen of the posterior rootlet of the nerve, usually the sixth.

I have written elsewhere "waves of nerve-perturbation may arise in an ovary and traverse a series of nerve-fibrils until they reach the peripheral endings of an intercostal nerve, where they are felt as gusts of neuralgic pain." Further experience merely strengthens this view. There will usually, too, be that pain and weight at the vertex with depression or lowness of spirits, and tendency to cry, the outward indications of cerebral anæmia of the posterior lobes, found with irritation in the lower bowel and the generative organs. Then there is anorexia, indigestion, and in some cases vomiting. Such is the real pathology of those cases of so-called subacute gastritis in young females, where obstinate vomiting goes on for weeks, resisting all treatment of the stomach, scoffing at bismuth, hydrocyanic acid, oxalate of cerium, and all remedies of value in morbid conditions of the stomach; where the patient is greatly reduced, the friends almost distracted, and the physician worried out of his life. Yet a year or two afterward, on asking after the object of all this anxiety, it is found she is well and probably married. This vomiting may have gone on for a considerable time and been interpreted as gastric catarrh, or gastric ulcer, and treated as such—without satisfactory results. Then there is also some pelvic matters which clinch the diagnosis. The uterus is reflexly filled with blood, is turgid and vascular, and consequently there is menorrhagia with leucorrhœa. Orgasm is readily produced by slight friction, or occurs spontaneously in sleep; and this irritability communicates itself to the adjacent bladder-centres in the cord, and there is inability to retain the contents of the bladder. Further, there are commonly times of great itching with heat or dryness in the fundament, and often in the vagina also.

Such are the features of a well-marked malady, which, however, has not yet found its way into our text-books. Word by word, indeed letter by letter, I learned to spell it out among my hospital out-patients; but the trouble brought with it its reward in the power to detect, and consequently to treat correctly, a very common malady, little influenced by measures directed at one or other of the outcomes of the condition, yet often tractable to appropriate measures. Those who have taken the pains to master the malady in all its details testify to the advantage they gained in practice therefrom. It is a condition commonly unsuspected. It frequently lies at the bottom of the ill-health which, when coexistent with an old apex consolidation, is taken for commencing phthisis; and when profuse night-sweats are added to the effects of the indigestion, the weakened lung-apex may and often does break down. How often this misinterpretation has wrecked the peace of a family, it becomes not me to say. I am concerned more with the matter of my own familiarity with morbid conditions than other men's shortcomings. But since the malady has been clear to me I at least have been able to avoid mistakes which, previous to that date, occurred with myself in common with others; and it is in consequence of my experience, past and recent, that I urge so strongly upon my readers the desirability of grasping this well-marked, if often unrecognized malady.

The sex, and often, too, the age of the patient, should put the physician on his guard. If the tongue also be normal or only slightly coated, and free from the appearances associated with gastric irritation; then the examination of the patient ought to be conducted on the lines just laid down. It travels over some very delicate ground for both physician and patient; and therefore must be conducted with every consideration for the patient's feelings. Yet enough can be gleaned from the most difficult patient to cross-examine, usually at least to determine the nature of the case. Sometimes it is possible to state her case to her, including her most inward feelings in a manner which makes the patient feel as if in the presence of a magician.

Having made the diagnosis, the treatment suggests itself. A blister over the tender, or otherwise offending ovary. Bromide of potassium, the drug *par excellence* in all reflex affections, and sulphate of soda or magnesia for the constipation. If there be also night-sweats then some atropine, say from a seventy-fifth to a twenty-fifth grain at bedtime. Then if there be much sickness it may be well to

give some bismuth, with or without hydrocyanic acid and soda, but this is only ancillary to the other treatment. Usually some injections of alum water are required for the leucorrhœa. A rational treatment indeed, founded on the nature of the malady, and, presto, the intractable patient gets well, to the unfeigned delight of all. Sometimes the result is not so satisfactory as to time, while in those cases where the morbid ovary is bound down by adhesions, relief is all that is practically attainable. But the bulk of cases readily do well, with gratitude on the part of the patient, and with credit to the physician.

Now some other matters may be mentioned. First comes the effects of mental strain and worry upon the digestive organs; second, the effects of mal-products of digestion upon the brain; and lastly the combination of the two.

On this wide subject general remarks are all that are possible, as the individual necessities of each case have to be and must be studied, for successful treatment, and what these are only becomes visible when the case presents itself before the physician. Those seeking further information will find it in my work on "Indigestion and Biliousness."

First as to the effects of carking care upon the assimilative organs, they have been recognized by writers, medical and other, since the dawn of literature. "Lean, hungry men" have been regarded as the type of the brain-worker, including the conspirator. While the rubicund visage of the well-fed man has ever been looked upon as indicative of an easy mind. Such generalizations are broad and true; but the subject admits of closer handling in the light of the present day.

In "this madly striving age" the pressure of business absorbs so much of the daily store of energy that the digestive organs are robbed of much of the *vis nervosa* that belongs to them, and, therefore, are only capable of digesting light food. Of old when anything uncommon had to be done, a good foundation was laid, as materfamilias expressed it, by a substantial breakfast; something in excess of the wonted fare. Whether such practice is successful in the present day is a matter for question. Probably the experiment is rarely tried among others than Yakoots or Indians. Then when the work was over an extra bountiful fare was provided, the huntsman's supper. This was all very well for men who were out in the open air, in the chase or war; but it is not a safe practice at the present time, except with those whose digestive organs are unimpaired, and retain much of their primitive Anglo-Saxon capacities.

The rule of the present day is rather in the opposite direction, viz., to have a very light meal after any special demand upon the system, possibly with some alcohol, though on this last the right of private judgment is brought to bear more than on any other matter connected with health. A few illustrations will demonstrate what it is desired to convey. One of our leaders of scientific medicine, one of the least fanciful of men, commonly lunched on a beefsteak, eating and enjoying the fat. But experience taught him that whenever more wearied than usual it was prudent to leave the steak-fat and take butter instead. When tired he could not digest the beef-fat, which he enjoyed as a rule. A lady well known to the writer has always to be very careful about what she takes when tired, else a severe attack of indigestion will be experienced. After a long walk, or its equivalent, a light meal alone is permissible, or compatible with comfort, and one of McKesson & Robbins' pepsin pills is in request. Some fried fish after a long walk set up severe dyspepsia with delirium, and left behind great susceptibility in the digestive organs for months after, requiring the greatest care in diet, and a medicinal course for its removal.

An American lady presented herself one day with confirmed dyspepsia, dating definitely from a certain long, tiresome drive, followed by a table d'hote dinner at Genoa, which, being hungry, she enjoyed She was quite of my way of thinking when my views were laid before her. Frequently cases come under notice where tiring evening work, as a Sunday evening service, is met by an unusually good supper—the house-wife's treatment. This may have been all very well in the days of yore, but it certainly is not well at the present time. A light meal and a little wine, as Timothy has wisely counselled, are the proper method of meeting the emergency in our day. What can be digested without drawback under ordinary circumstances will not be satisfactorily digested when the system is exhausted either by bodily or mental toil.

The effects of acute emotion in upsetting the digestion are thoroughly recognized; in fact, anorexia is so set up, and the food which would not be digested is not taken. But we are still far from comprehending fully the more chronic effects of wearing care or anxiety. Yet the fact must be recognized that where the mind is greatly exercised, while the body is insufficiently exercised, the dietary must be regulated accordingly. A plate of porridge, oatmeal, cerealine, or hominy, with a pint of cream, and some stewed fruit to finish off with for breakfast. For lunch, some well-buttered mashed potatoes, with biscuit and butter and a glass or two of milk. For dinner some boiled fish, followed by some chicken or game, and a milk-pudding made without an egg, and digestive biscuits and butter (with just a nip of cheese as a flavoring agent for those who can eat cheese), with a glass or two of good French wine or its equivalent. Such is the dietary, or ought to be, of the man who has much brain-work to do. And further, he should allow himself plenty of time over his meals. It is bad economy to save time by cutting it off the meal-time. And such is the dietary that must be enforced when the brain-worker has made himself a patient. The use of pepsin to aid the natural digestion was given in the first article and need not be referred to again (see THE MEDICAL RECORD, September 1, p. 225). Then there should be a sufficiency of sleep to rest the wearied organism. A day of work followed by another day of play in every twenty-four hours, is the order of the present day, and to secure this the time for meals is cut down to a minimum, and the hours of sleep curtailed to an injurious extent. But the experiment will be found a failure; it is not among the potentialities. The busy brain-worker must learn to see that he cannot tax his system at will; if he will not be told he will be made to comprehend the subject. And he may depend upon it—whether these remarks are acceptable or not—it is much better to take care in time than to do the mischief and have to take the care when partly disabled. My counsel to such patients is as follows: "You had better adopt the habits of an invalid in order that you may not become one. You had better take care before you break down than wait till you break down and are compelled to take care of yourself with your working-power crippled!"

The preventive treatment of neurosal indigestion is quite as important as its palliative treatment when once established. The lines are the same in both, viz., to give easily assimilable food, rich in fat, and containing albuminoids, but in sparing quantities; to allow a proper time for meals, and a sufficiency of sleep. Beyond this there is the matter of phosphorus. Phosphorus and fat in combination are the food of the brain par excellence; and to this dietary, rich in fat, it may be well to add phosphorus in pill, or better still in the syrup of the hypophosphites. Yet when all this has been done, and the latest revelations of physiology worked out by the chemist are placed at the patient's service by his physician, there comes that indispensable factor which the patient alone can do, viz., take proper care of himself. When I look round on the men I know, whether in the profession or out of it, which are those who are steadily holding their own, accomplishing huge quantities of work, yet with their energies unimpaired and their working power as good as ever? They are those who do not add a day's play to a hard day's work! Men who, after a hard day of work, take their dinner quietly and

slowly—not bolting it to rush off to the theatre or other place of amusement, as a billiard-table, perhaps. Who spend a quiet evening in intellectual pleasure, unbending the bow, while adding to their stores of knowledge: and going to bed early, to sleep in a cool bedroom, instead of breathing a hot, vitiated atmosphere till nearly midnight, gulping down some indigestible mass like a lobster salad, and then, quite late, lying down to sleep—to leave a wearied system to digest the late supper.

This is an aspect of nervous indigestion which is worth pondering over. The physician can first digest the matter himself and then expound it to his patients. There is another matter, too, which needs more general recognition.

Of old, as said before, the more work the more meat. "Work goes in at the mouth." The fact that an underfed animal, man or beast, could not accomplish much work was vividly realized: and the hard-headed northern farmer had his farm laborers eat at his own table. But the converse is not so absolutely certain. Meat will not necessarily give strength, *i.e.*, if it be not digested. Constantly patients—not with primary indigestion, for that pretty well regulates matters itself—suffering from malassimilation come under notice, who have been eating all the animal food they can get down, under the impression that this is the plan to adopt. Probably, if a married man, his wife has been aiding and abetting him in his pernicious efforts to acquire strength. They have studied the advertising columns of the newspapers, and read of "Iron and Quinine Wine" (an admirable tonic in mere asthenia or debility), and have added that to the meat dietary; and yet the patient grows visibly weaker and feebler under the regimen. When the liver is not working well nothing will further derange it more certainly than a chalybeate.

In these cases the albuminoids which reach the liver by the portal vein are not elaborated and passed forward as the serum albumen of the liquor sanguinis, but are thrust downward as bile acids or lithates. "To feed the patient is to feed the disease," as the old phrase ran. To crowd the liver with albuminoids by a meat-dietary, the natural digestive powers being helped by artificial digestive agents, is still further to embarrass it. The attempt defeats itself. The mal-products of assimilation find their way into the blood and act as toxic agents, enfeebling the mental processes, involving the mind in gloom, and depriving the unhappy individual of all pleasure in life, till death becomes positively attractive. Such are the untoward outcomes of the delusive attempt to gain or rather to regain strength of mind and body by a highly nitrogenized dietary. Yet the proper treatment of such a case is met by prejudice, by preconceived opinions. Your wisely regulated dietary is described as "starving the patient!" You strive to sweep out the nitrogenized waste by a mercurial followed by some sulphate of soda; this is "too reducing!" You are liable to be scoffed at as an antiquated quack-salver, who has no right to exist outside of a museum for antiquities. How many women do I know now wearing widow's weeds, who might still have had husbands and bread-winners had not the present murderous age of stuffing overmastered prudence, and the lessons of physiology and clinical medicine been set at nought!

Whether such regimen is old-fashioned or in advance of the times, matters little. It will have to be adopted. The capacities of the liver will have to be appraised; and if Dame Nature, knowing better than we perhaps do, attempts to balance matters by cutting down the appetite, it is not well to thwart her by bitters. If a man feels unequal to his work, it may be wise at times to cut his coat according to his cloth. It may not always be prudent for a man to whip himself up to an ideal of energy and working-power, as if he was a steam-engine. The increase of Bright's disease in our day may not be entirely accounted for by our increased acquaintance with it and the means of its detection. Over-work, if Clifford Allbutt is to be believed, and overcramming with meat, if some others of equal authority are to be credited, have much to do in upsetting the liver first and damaging the kidneys afterward, to say nothing of the lithiasis, cholæmia and toxic oxalates which belong to this condition of secondary indigestion, while the relations of glycosuria to over-taxation of the nervous system are now well recognized. This may be an unacceptable doctrine, but it is to be feared it is true and well-founded.

AN OPERATION FOR THE REMOVAL OF THE THYROID GLAND IN PARTS.

By WILLIAM FULLER, M.D.,

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The attention of the physician is frequently called to thyroid enlargements, not only on account of the deformity occasioned by them, but by the troublesome and even dangerous inconveniences which are developed in some cases. Simple hypertrophy involving the entire gland and of moderate dimensions commonly subsides by regulating the general system, the administration of iodine in some form together with local counter-irritation over the swelling by means of tr. iodine co. or ung. hydrarg. biniodidi.

In other cases, presenting partial enlargements which project as tumors on the side or in the middle of the neck, and in some cases in which the entire gland is enlarged, the above remedies are inadequate. The tumors are either large cysts or composed of a collection of a great number of minute sacs from the size of a flaxseed to a pea and containing fluids of various color and consistency. Internal medication and counter-irritation has no appreciable effect upon them. Puncture of the sacs and drawing off the fluid is only temporary and may be done for information as to the nature of the case. Galvanism applied to the skin is of no benefit, but by means of needles introduced into the tumor I have succeeded in diminishing and softening it up somewhat. I generally use a small trocar canula in order to allow of the escape of gases formed by electrolysis, and from four to twelve cells of the Galvano-Faradic Company's battery. A small abscess formed in a few instances, which was of no moment, as the pus found exit through the puncture or was evacuated by the knife. I have practised the injection, by the hypodermic syringe, of tr. iodine co. in a number of cases, and by its persistent use attained some success, but not what I had hoped for from favorable reports that I have read. In one case, in which the enlargement was great, I injected from fifteen to thirty drops of tr. iodine every week for three months at a time, desisting for a short time only when symptoms of iodism were developed. I continued this treatment with few intervals for about two years, when it was interrupted by the woman becoming pregnant. I also tied the superior thyroid arteries in this case, which immediately softened and reduced the swelling to some extent. The size increased during the pregnant state, as it had done on previous occasions. It is now about one-half its former size and remains stationary. I have seen injections of tr. iodine, practised a number of times upon thyroid enlargements in horses, effect a cure in every instance. The method was to puncture the gland deeply with a penknife and to force into it, with a metallic syringe, from one to two ounces of the simple tincture at once. The result was swelling, sloughing of the gland substance, suppuration, and recovery in about two weeks with little or no scar. I should be afraid to try this in the human subject on account of the situation and important relations of the tumor.

I injected ergotine on one occasion, the effect was immediate, the patient turned very pale, fell down, became cyanosed, respiration gasping, and he regained consciousness slowly and with difficulty. I think that I used a solution of three grains and injected slowly.

Cysts evacuated by the trocar soon refill, and in my experience injections into them are of little use, but I have succeeded in removing them by free incision into the sac and the use of means to excite suppuration. I have found this process to be tedious and troublesome and will relate two cases in illustration of the results obtained.

A young man, aged eighteen years, much debilitated, and having a pale cachectic appearance, had a swelling just above the upper end of the sternum, which seriously interfered with respiration and obstructed the passage of food. I punctured it with a trocar and drew off about half a pint of pale reddish fluid, made an incision into the sac at once, and though not aware of dividing a vein, I was surprised by a rather profuse flow of venous blood, which I think came from the rupture of small vessels lining the sac. However, the hemorrhage was immediately checked by the introduction of a sponge saturated with strong liq. ferri perchlor. The sac was quite large and the finger could be passed freely behind the upper end of the sternum and the clavicular articulations, and laterally under the sterno-mastoid muscles. Its relations could be easily distinguished, viz., the innominate and carotid arteries, trachea, and œsophagus. Some swelling and fever were present on the following day; the sponge was removed and the sac washed out, twenty grains of quinine were administered, and the neck was enveloped with cloths wet in a solution of ammonia chlor. The swelling and fever subsided, and suppuration was established in a few days. A large-sized drainage-tube was inserted and the sac was frequently cleansed with the solution of ammonia chlor. The sac contracted and discharged a sero-pus for about two months. Smaller drainage-tubes were substituted and, lastly, the opening was allowed to heal up, as the discharge became reduced to a very small quantity. After a lapse of a few weeks the swelling and tenderness returned, a yellow and fetid pus was discharged, and drainage was again resorted to, with injections of tr. iodine, saturated solution of iodoform in ether, a saturated solution of zinci chlor., and many other remedies at various times, with the view of establishing a healthy action or destroying the secreting surface, but without avail. Finally, when I had almost despaired of closing the troublesome tract, it became infested with maggots. I let them alone for a few days, since their presence did not appear to trouble him and then cleared them out with a strong solution of plumbi acet. The tract healed up at once, has remained so for over two years, and the young man enjoys robust health. Just what function maggots may be designed to serve in the economy of nature, I will leave it to the reader to form his own opinion, but I would suggest that by devouring sloughs and flesh endowed with little vitality, they serve to cleanse the wounds of animals, and by crawling into deeper parts they form channels for the discharge of fluids and thus become an important factor in Nature's system of providing for the healing of wounds by drainage and cleanliness, the principles upon which the success of the surgical art depends. I once saw a case in a horse turned to pasture on account of two large callous tumors on his shoulders. They were eaten out clean by maggots and scarcely a scar was left to mark their situation.

The second case was a girl aged twelve years, pale, sallow, and debilitated. Breathing was difficult upon the slightest extra exertion in walking or in going up stairs, and she was affected with occasional attacks of spasmodic croup. There was a swelling at the root of the neck since she was a year old, having the appearance of a large goitre. Upon puncture it proved to be an abscess, and was drained; but, contrary to my advice, a small drainage-tube was inserted. During two weeks she suffered from a high fever, which partially subsided when the discharge became more free. She was highly nervous and afraid of surgical instruments, and the case coming under my immediate care, I introduced a seatangle tent into the small opening, and after distending it inserted a large tube. All febrile action presently subsided, the appetite improved, and she gained rapidly in her general health. Her breathing improved and she was allowed to play in the open air with other children, which her former condition prohibited. I applied many things to the cavity of the sac with the view of irritating and destroying the secreting surface, such as tr. iodine co., cantharides, ung. hydrarg. biniodidi, argenti nit., pure nitric acid, iodoform, saturated solution of zinci chlor. in alcohol, solid zinci chlor., actual cautery, and other things too numerous to mention. The sac was rebellious to all treatment, recovering its former condition after each application. Finally I introduced a gold drainage-tube five-eighths of an inch in diameter, so as to expose the whole surface freely to the air and for cleanliness. The secretion was very much diminished in a short time, and in the course of a few months the sac became healed to the integument around the tube, which was then removed. The present condition is an opening about half an inch in diameter leading into the sac, which is contracted into an irregular cavity about the size of a walnut and lined with a membrane resembling the mucous membrane of the larynx, with which, however, it does not communicate. She has, since the sac was freely discharged, developed from a stunted and puny girl into a robust young woman. It is about two years since the sac was opened, and from the experience that I have had of these cases I conclude that the treatment of them is very tedious and dangerous, unless very free drainage is maintained.

I have removed solid tumors of the thyroid gland four times. In the first case I removed the tumor with its sheath, successively tying all its attachments before dividing them as the dissection proceeded. The operation was comparatively bloodless, but tedious, so that the patient was a long time under chloroform. The wound was not approximated until suppuration was established, and an uninterrupted recovery took place, leaving only a linear scar. This case has been reported in the *Detroit Lancet*, December, 1878.

Upon a study of the blood-supply to the thyroid gland it will be observed that the larger vessels rest *upon* the sheath of the gland and run within the processes which separate its lobes. The superior thyroids are distributed upon the surface and the inferior arteries enter the processes near the trachea, along which they are distributed, and also to the posterior surface. The gland substance is supplied by numerous small vessels which pierce the sheath in the course of the larger vessels; consequently, if an incision is made through the sheath and the gland is separated from the inner surface of its capsule, no large vessel is divided and very little hemorrhage is encountered. If the finger is passed around a lobe which is left *in situ* there is little or no bleeding, since the hemorrhage is restrained by the pressure of the surrounding tissues. After a time a ligature can be tied around the base of the lobe and it may be removed by the knife, or without a ligature the lobe may be broken off and a piece of sponge saturated with strong ferri perchlor. can be pressed against the stump, which will effectually restrain the blood. There is no advantage gained by injecting iron into the substance of a lobe before removal. A portion of the gland, or the whole of it, may be removed at a time in this manner with comparatively little loss of blood, and the operation is attended by little pain and shock.

One assistant only is required, which, however, is not necessary, and the operation is robbed of its formidable aspect. I have operated in this way upon three patients, two of them died from other causes than any incident to the method employed for the removal of the tumor. A ship carpenter, aged thirty-five years, had an enormous goitre, the circumference of the neck measuring 27½ inches. The tumor projected beyond the chin, which rested upon its upper surface, it covered the upper part

of the sternum and the clavicles as far as the shoulders, large veins coursed over its whole surface, and especially in front. There were two large perpendicular trunks about the size of the thumb running parallel about two inches apart and united in the centre by a transverse trunk of the same size so as to form a letter H. There was a strong bruit heard all over the tumor, the neck and head were much congested and bluish, the eyeballs prominent, and he wore an expression of great anxiety. His voice was crowing and he had frequent attacks of spasm of the glottis. Expiration and inspiration both were prolonged and difficult as well as deglutition. There were bronchial râles over both lungs. This growth had steadily increased, notwithstanding that he had used many remedies, external and internal, by the advice of many physicians. His case was indeed desperate, and apparently beyond hope. He implored assistance at any risk, desirous of submitting to an operation, though informed that he would more than likely die before it was completed. Under these circumstances his urgent request could not be refused and I determined to operate, which I did with the assistance of several medical gentlemen of this city. Chloroform was not administered, nor were the tissues very sensitive on account of the stretching of the nerves. A curved needle was passed under the large transverse vein crossing the neck, and ligatures were applied on each side of the median line. An incision was made under the chin about two inches long in the middle line and another below near the sternum, their depth extending through the capsule of the gland. These were quickly made as the bleeding was profuse, and the fingers were thrust from above and below until they met along the trachea behind the mass. Two buckskin ligatures of large size were passed through the channel made by the fingers and were tied over the mass on either side as far apart as possible, and stitched to the integument to prevent them from slipping. Buckskin was used because I thought that it would be less liable than hard cords to cut into the friable tissue of the tumor, besides it possesses a certain amount of elasticity. The incisions above and below were now connected and the trachea exposed. The hemorrhage at this stage was small in amount, partly due to the faintness of the patient. The gland substance protruded through the wound, a large portion was removed and I was surprised to find that as the pressure was relieved in front of the trachea the respiration became more difficult. This tube was flattened by lateral pressure and not crushed back against the spinal column as I supposed. The patient was much exhausted, consequently I opened the trachea and introduced a rubber tube of half an inch calibre and six inches long, of sufficient length to reach between the trachea and the integument, and through which he breathed easily. He sat in a chair leaning back during the operation, and sustained himself with great fortitude. He was put into bed and a sponge wet in warm water was placed over the end of the tube. He passed a very comfortable night, breathing and sleeping quietly, his countenance looked pleasant in the morning, there was no fever, and his appetite was good for tea, toast, and an egg for breakfast. The ligatures were loosened, and as there was no bleeding they were removed. I found that the gland was easily separated from its sheath with very little hemorrhage and pain. I loosened a lobe in this manner, broke off its attachment near the trachea, and a piece of sponge saturated with liq. ferri perchlor. was applied to the stump. In two days the whole or nearly all of the tumor was removed, a lobe or two at a time, as the patient's feelings would permit. The cavity was kept clean by frequent washing with a weak solution of ammonia chlor. Subsequently his spirits and appetite continued good, he partook freely of beef-tea, eggs, whiskey sling, etc. His temperature ranged from 101° to 103°, tongue was clean and moist, and the bowels moved occasionally without medicine. This happy state of affairs continued up to the tenth day after the operation, when the neck had contracted nearly to its natural size, the sterno-mastoid muscles showing plainly, and the wound was granulating and secreting a healthy pus. At this juncture the night nurse unfortunately got drunk, and at 8 A.M. next morning I found my patient out on the floor in a cold room, with the tube displaced. He was almost strangulated and in a violent chill. He never recovered from this chill and the shock of fear. The wound immediately took on a dry appearance with no activity, and he gradually sank and died upon the sixteenth day after the operation. There was difficulty of swallowing two or three days before his death, food and drink coming out at the tracheal wound.

My next case was a lady of sixty-two years. She had a hard, immovable tumor, situated in the region of the thyroid gland, and was suffering from extreme dyspnœa, which had been steadily increasing upon her for some months. The tumor appeared to be of a cancerous nature, was firmly adherent to the larynx, and was about the size of a goose's egg. I made an incision into it about three inches long in the middle line of the neck. There was considerable hemorrhage, which was staunched by pressure and perchloride of iron, after which I removed a portion of the gland as in the above case. This was at 3 P.M., and the respiration was somewhat relieved, but at 1 A.M. it was so difficult that I was forced to perform tracheotomy, which was a very difficult operation under the circumstances, the trachea being flattened laterally and pushed out under the left sterno-mastoid muscle. It was found with difficulty by thrusting a small trocar in different directions through the tumor. I introduced a piece of rubber tubing, which was changed frequently and kept clean as in the previous case. She also died on the sixteenth day after the operation from exhaustion and congestion of the lungs, the course of her case being about the same as in the previous one.

One great difficulty encountered in these cases was the impossibility of preventing fetid gases and fluids from entering the trachea, although the greatest care was taken to obviate it. This was the reason that I refrained from opening the windpipe immediately in the last case. I think that this cause contributed largely to produce the unfavorable results.

The following case had a more successful termination: A horseshoer, aged about thirty-eight years, had an enlargement at the root of the neck, which had been increasing in size for three years, and for six months it interfered with his breathing, especially in stooping, so that he was obliged to relinquish his business. In July last, while walking on the street, he had an attack of vertigo, a sudden increase in the difficulty of respiration, and a sensible enlargement of the tumor. He came into my office in a state of great alarm; there was a strong pulsation of the carotid and apparently of the tumor, which simulated aneurism. It was about the size of the closed fist and situated on the left side extending from the clavicle to the upper border of the thyroid cartilage. I concluded that it was an effusion of blood within the thyroid sheath, and punctured it with a small trocar, drawing off about an ounce and a half of dark-colored blood, which relieved the tension and the difficulty of breathing. A cold compress and bandage were applied and he was given eleven drops fluid extract digitalis every two or three hours until the heart's action was quieted. He sent for me in about two weeks and stated that he had suffered from fever and chills for a week, and that his neck felt sore to the touch, with a throbbing in the tumor. There was a tympanitic note over the seat of puncture, and upon introducing the trocar again there escaped a fetid gas and bloody pus, which was evacuated freely by the knife. Introducing the finger, the lobes of the enlarged thyroid gland could be felt. These were separated from the capsule, broken off near the trachea and into small pieces, so that by squeezing the sac the débris was ejected through the opening. Small pieces of sponge with a string attached to each and saturated

with liq. ferri perchlor. were immediately introduced and checked the hemorrhage. The sponges were removed next morning, the cavity washed out with a solution of ammonia chlor., and a large drainage-tube introduced. The operation required no assistant and was done at once when the opportunity presented, without exciting the patient's mind by making him aware that any important operation was in progress. Cleanliness and free drainage constituted the treatment, with the exception of one twenty-grain dose of quinine. His fever subsided after the operation, and as he felt well no note was taken of his temperature. The cavity slowly contracted by granulation, and recovery was complete in about six weeks. There is a small nodule on the right side of the neck and a little thickening in front of the trachea, but the breathing is free and the tumor on the left side has entirely disappeared.

ON THE TREATMENT OF PALPITATIONS OF THE HEART.[1]

By PROFESSOR GERMAIN SÉE,

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PALPITATIONS consist in an increase of the activity, though not of the energy of the heart.[2] From an etiological point of view they may be ranged under four heads: 1, Nervous palpitations; 2, Physico-dynamic palpitations; 3, Anæmic palpitations; 4, Toxic palpitations.

I shall treat of all these species of palpitations, but not exactly in the order given, and for convenience will begin with the last, which I have called

TOXIC PALPITATIONS.

The first care of the physician when he finds himself in presence of a patient who has, or fancies he has, real palpitations, should be to examine into the daily hygienic and dietetic habits of the patient. The abuse of tobacco, the immoderate use of tea, coffee, alcohol, may produce palpitations with or without arythmia, as well as intermittences. If, in order to obtain prompt abandonment of the abuse, it is generally sufficient to warn patients of the danger which menaces them, it is no less true that sometimes one meets stubborn resistance in the case of inveterate smokers and drinkers, to whom the vicious habit has become a passion and almost a necessity.

In these cases it is necessary to proceed by a gradual process of withdrawal, and especially where the prolonged use of tobacco has created a sort of habituation—a veritable accommodation in the organs and functions, which it would be dangerous suddenly to suppress. There are a great many smokers whose easy and healthful digestion depends on the cigar or pipe which they smoke after meals; others find the best remedy against constipation to be a pipe smoked on an empty stomach; others maintain that their brains will not work to advantage without the customary smoke. It is precisely these individuals who become subjects of palpitations, and if you would treat them successfully you must not too suddenly and completely wean them from tobacco. Better by far limit the quantity of tobacco than to impose on them absolute deprivation, which, moreover, it is very difficult to enforce. All that you need do, in order to obtain a cessation of the palpitations, is to transform abuse into moderate use.

It is much easier to arrive at the suppression of the use of tea and coffee. It is more difficult to procure an abatement of alcoholic excesses, which, by the way, seldom and only for a brief period, manifest themselves by palpitations; they soon terminate in degeneration of the heart.

PHYSICO-DYNAMIC PALPITATIONS.

When, after an earnest inquiry, you have succeeded in eliminating from the group of probable causes the influence of poisons and of substances which trouble the action of the heart, the duty of the physician will be to investigate the state of the heart, its orifices, its valves, its proper texture, its lining membrane.

It is deserving of remark that it is precisely the larval affections, that is to say, those which do not produce any abnormal murmurs, as is the case with simple dilatation of the heart, which oftenest give rise to palpitations. In these cases digitalis finds its proper place; it tones up the delibitated heart and gives regularity to its beats.

DIGITALIS IN THE PALPITATIONS OF ORGANIC DISEASE.

When we are concerned with hypertrophies consecutive to valvular insufficiency or constriction of the orifices, there is a first question to answer before we can decide on the treatment. Is this hypertrophy sufficient or not to compensate for the obstacle to the outflow of blood in the case of constriction of the orifice? is it sufficient to enable the ventricle to clear itself, in the event of regurgitation from leakage of the valves? If so, that is to say, if the hypersarcosis is sufficient to enable the heart to fill the arteries, digitalis is useless, without being positively dangerous, unless by long continuance in its use.

Let us take an example: In Corrigan's disease (aortic insufficiency) the left ventricle constantly grows thicker and stronger by reason of the extra work imposed on it in propelling into the aorta the regurgitant blood, as well as that coming into its cavity from the auricle. As long as there is no venous stasis in the lungs, or œdema of the lower extremities, one may take it for granted that the hypernutrition of the ventricle is sufficient to overcome the disastrous effects of the reflux. Why then prescribe digitalis? Wait a while, the time will come, with almost absolute certainty, when, unhappily for the patient, the action of the heart will be troubled. There will be palpitations which will necessitate the use of digitalis, and in this case you are not to fear the effect of the drug, even if the heart's impulse suggests exaggerated energy; it is but the semblance of increase of energy. On the other hand, digitalis does not do harm when given for the hypertrophy itself. Heretofore it has been generally believed that hypertrophy may be excessive, and render one liable to danger from active congestion of the brain or lungs. This is a mistake, and it is as much as ever if the hypersarcosis is sufficiently pronounced to effectually overcome the obstacles to the outflow or regular progression of the blood. No one has ever seen active cerebral congestion result from exaggerated afflux of blood to the brain by reason of a hypertrophied heart. In the mechanical diseases of the heart you have not active but passive congestions, the heart having no longer sufficient contractile force to enable the blood to pass through the capillaries and veins. Therefore there is no absolute contra-indication in this disease to the administration of digitalis.

The indication for digitalis, however, becomes very plain if dyspnœa or œdema comes on, showing that the heart is flagging in its work of blood-distribution. The same may be said of palpitations arising from hypertrophy in general. Suppose, for example, that you have a case of compensatory hypertrophy, accompanied with palpitations, in a nephritic patient (this would be a rare event, for arythmia would be the rule); you may without

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[1] Translated, by permission of the Professor, for THE MEDICAL RECORD, by E. P. Hurd, M.D., Newburyport, Mass.

[2] [Professor Sée makes a distinction between the ataxic and the arythmic forms of heart disease, which he still further distinguishes from intermittences. Palpitations are ataxic manifestations, and are characterized by accelerated pulsations. Arythmia is disorder of rhythm, and the disturbance may pertain to the order, number, and duration of the pulsations. In the case of intermittences the normal and for the most part regular series of beating is from time to time (and more or less periodically) interrupted by a momentary arrest of the heart's action. If the pulsations are irregular, it is arythmia. If they appear to be more intense and rapid, we call them palpitations. In true intermittence the heart's action may be more intense, we can hardly say, however, that there is deviation of rhythm; we notice only the pauses at the end of every 4, 5, and 10 pulsations. Bouillaud calls these arrests or hesitations of the heart *false steps* (faux pas). In practice these different kinds of abnormal functional working of the heart are often confounded, and it is true (as Professor Sée admits) that palpitations often coexist in the same patient with arythmia and intermittence.]

hesitation prescribe digitalis. In spite of affirmations which have recently been made respecting the danger of these hypertrophies and the part which has been attributed to them in the production of uræmic cerebral accidents, digitalis does not augment the hypertrophy; the function of the hypertrophy is that of a moderator, and digitalis can in no way render harm.

There are certain palpitations due to hypertrophy where digitalis is of less utility. I refer to hypertrophies attending adolescence; sometimes these result from displacements of the heart by faulty chest-conformation. These hypertrophies are attended with palpitations; but it is also noteworthy that young men may suffer from palpitations from other causes, and that these palpitations may be about as troublesome and persistent as those which result from hypertrophy. Onanism is a fruitful source of such functional palpitations. As to the diagnosis, the hypertrophies I am speaking of may be known by augmentation of the volume of the heart, as shown by increased dulness, and displacement downward of the apex of the heart. These signs coexisting with palpitations would suggest that we have to deal with the hypersarcosis of adolescence; in other words, with a sort of exaggerated and precocious development of the heart muscle, and this is about the only kind of cardiac hypertrophy which frequently gives rise to palpitations without necessary degeneration or atrophy of the myocardium.

Now in these cases digitalis is not needed, if there be faulty conformation of the thorax; a well-directed course of gymnastics is far preferable. If there be no thoracic mal-conformation, digitalis may be tried, and if the palpitations be not quieted in the course of a few days you must find some other remedy: bromide of potassium and chloral often render real service in these cases. I have not seen any good from hydrotherapy.

I have now an important remark to make respecting the usage of this medicament. During these late years some authorities have been very precise in their statement of the indications and contra-indications of this eminently useful remedy. They have recognized in its therapeutic applications certain inconveniences, dangerous and even mortal effects. What has troubled them the most has been both the prolonged action, and the slow, tardy action of the drug. This only goes to show their ignorance of the slow, and at the same time cumulative, effect of therapeutical doses of this medicament. More than twelve years ago I divided medicaments, from the point of view of their promptitude and duration of action, into two classes; the one slow and cumulative, of which digitalis is the type; the other of medicines, like the salts of soda and potash, whose action is immediate, but which are as rapidly eliminated. In this last category may be ranged salicylic acid and the salicylates, which act with astonishing promptness, and undergo elimination almost as soon as they are absorbed. Is it a fault of these remedies—of some that they stay too long in the economy, of others that they leave it too quickly? It suffices to know these important peculiarities, that we may avoid inconveniences by not allowing digitalis to accumulate too much in the organism, and by not suppressing too soon the salicylates.

Apart from these peculiarities of action digitalis has no grave inconveniences except the difficulty of tolerance by the stomach. The immediate effects are more to be feared than the consecutive effects, which are less often seen. I have observed the latter, and I will tell you under what circumstances. In a great number of patients affected with cardiac lesions, whether of the valves and orifices or of the myocardium, chronic endarteritis and atheroma of the arteries exist. This degeneration of the blood-vessels occurs in advanced age in spirit-drinkers and in persons affected with Bright's disease. Gall and Sutton even regard arterial sclerosis as the rule in chronic interstitial nephritis. In all these cases the effects of digitalis may be nil, or even harmful. I will show you how: The action of digitalis is manifested in an augmentation of the energy of the heart and of the tension of the blood-vessels, in a word, in a more active circulation. Now if the blood-vessels are degenerated, if the elasticity of the middle coat of the large and medium-sized arteries is compromised, if the muscular tunic of the small arterioles is invaded, the latter have lost their power of contraction, and the former their elastic retraction, and the peripheral circulation is impeded. Here digitalis is ineffectual; it may be injurious in compelling the blood to accumulate in parts the farthest removed from the heart, as in the lower extremities, where it remains stagnant in the veins, and infiltrates the tissues. This, then, is the most plausible explanation of the dangers of digitalis. Apart from these conditions, it does not occasion any inconvenience, unless in the event of mal-administration. It may, for instance, be given in too large doses, and in too small doses, just as other active medicines—chloral, bromide, salicylic acid, etc., of which one is so apt to err in the dose. Too much timidity or too much rashness; no sure and rigorous convictions; no confidence in established experience—here you have the personal bias of not a few who are clamorous for new methods of treatment, or carpers of the old.

CONVALLARIA MAIALIS.

I have been talking of digitalis and the indications for and against, according to my usual custom the last few years, of treating this medicament in my lectures, and so far have overlooked the fact that we have in convallaria maialis (called muguet in French, lily of the valley in English) a remedy far superior, and in every case perfectly harmless. In palpitations of the physico-dynamic order, the extract of convallaria succeeds marvellously. I make only one reservation. In the hypertrophies of adolescence (hypertrophies de croissance) I add the medicament most suitable to modify the tissue of the cardiac muscle; I refer to

IODIDE OF POTASSIUM.

One of the most useful remedies for palpitations due to hypertrophy is iodine. According to Magendie and other distinguished physicians it constitutes the most certain means for reducing the volume of a hypertrophied heart, and for removing the dangers resulting from this hypernutrition. According to this theory the iodide would be a bad remedy, doing more harm than good, for the hypertrophy is salutary and corrective, and the only means whereby an obstacle can be overcome. Happily it has no power to effect the denutrition of the heart muscle. I have employed iodide of potassium in a considerable number of diseases of the heart, with hypertrophy perfectly defined and strictly compensatory, and in all these cases the heart lost neither force nor volume. Far from that, the action of the iodide, which is so useful in cardiac dyspnœa, seems equally to aid the central peripheral circulation; the heart, far from losing energy, seems to gain in contractile force, which is always a desirable condition. So, then, the idea that iodide of potassium causes, in any sense, atrophy of the cardiac muscle, is erroneous. It benefits the hypertrophies of the period of growth as well as compensatory hypersarcosis. It is no less true that it may prove remedial in other cardio-pathies with palpitations, but without dyspnœa.

ANÆMIC AND DIATHETIC PALPITATIONS.

I come now to a question in therapeutics which *seems* easy of solution. I refer to the treatment of palpitations of anæmic or diathetic origin. It is so easy to cure anæmia with iron, or the arthritic diathesis with alkalies, that the remedial indications of these palpitations of blood origin seem hardly to merit serious discussion. Nevertheless, if the problem be closely scanned, its complexity will be recognized.

In the class of diathetic anæmias, as for instance, in tuberculous or cancerous anæmia, palpitations are fre-

quent. They have, however, neither signification nor duration, and do not furnish any special indication of treatment; nay, more, iron is bad for the tuberculous, as well as for the cancerous; digitalis is worse than useless, for it takes away the appetite and adds the evils of inanition to the constitutional anæmia. I do not speak of palpitations of gouty origin; they are far from being proved, at least if by the term gout we understand lithæmia.

How is it with the true anæmias? We will suppose the case of a young woman who has become anæmic in consequence of severe flooding. We will suppose a man, previously vigorous, who has lost too much blood from hemorrhoids. Both complain of palpitations, and of being easily put out of breath. Iron will infallibly increase the hemorrhages, the anæmia, and the palpitations. Hæmostatic remedies are first demanded; when you have stopped the blood losses the palpitations will disappear.

What good, on the other hand, will iron do in the case of an individual whose dietary is insufficient, whose meagre rations bespeak misery and poverty; who breathes, it may be, confined, vitiated air? Iron can do nothing for the anæmia of inanition, or even for the anæmia of professions which are attended with insufficient aëration. The cause must be removed before a cure can be realized.[1]

Another kind of anæmia with grave palpitations, necessitating special care, and seeming to call for iron, is that which is consequent on seminal losses. Much, however, as iron seems to be indicated in these cases, it is seldom that it is of any marked efficacy. Every day, almost, we see patients emaciated, with sunken eyes, pale earthy countenance, complaining of inability to do mental work, of great muscular debility, generally, too, of pains in the back, and of palpitations coming on without any obvious reason, and which are not aggravated by walking, even on rising ground. These individuals are melancholy, constantly brooding over their seminal losses, which may or may not be accompanied with sexual impotence. They have been formerly masturbators, and are suffering the consequences of their folly. They suffer from palpitations (the result of sperm-waste) and can hardly be persuaded that they have not serious disease of the heart. If, confounding this sort of debility with the globular anæmias[2] we give iron, with—it may be—hydrotherapy, we shall very soon find our mistake. In fact, we are not concerned here with simple modification of the number, form, or composition of the red globules (in which case iron would have magical efficacy), we are concerned with a condition of general enervation and failure of nutrition. Without recommending the local treatment by urethral injections, astringent or sedative, which are of no use, and tend injuriously to fix the attention of the patient on his over-sensitive genital organs; without recommending cauterizations of the membranous or prostatic urethra, in accordance with the superannuated and dangerous practice of some surgeons, we may formulate in this manner the results of an experience which dates back a great many years, during which we have been engaged in earnest professional work.

Iron, unless we except the potassic tartrate, is without effect. Hydrotherapy is generally ill-borne; warm douches and warm baths do harm; bromide of potassium debilitates the patient too much; antispasmodics are disappointing. This is the treatment which has succeeded best in my hands: 1. One gramme (15 grains) of iodide potassium, to be taken in two doses daily after meals. 2. With each dose of the iodide, three pills, containing each 15 centigrammes (nearly 3 grains) of aqueous extract of ergot, and 2 centigrammes ($\frac{1}{8}$ grain) of alcoholic extract digitalis. These two medicaments have a marked depressant action on the reflex excitability of the spinal cord. 3. A regimen consisting principally of meat, fish, and vegetables, to give strength and repair waste. 4. Red astringent wines in moderation. 5. Abstinence from mineral waters, effervescent waters, spirituous liquors generally—especially beer—tea and coffee, and tobacco. 6. Ablutions in tepid water in the morning. 7. Moderate physical and mental labor. 8. Strict avoidance of sexual excesses; avoidance of absolute continence.

I have dwelt thus lengthily on the treatment of seminal emissions on account of the practical difficulties which are encountered in these cases, and on account of the frequency of these complaints.

I finish the consideration of anæmias with palpitations by some hints as to the treatment of chlorosis.

In this disease we witness the almost certain triumph of iron. Under the influence of this remedy—even though the case may be an inveterate one—we see rapid diminution of the weakness, sensory troubles, and breathlessness. The palpitations also abate, though slowly. There is, however, an inherent difficulty in this mode of treatment; the ferruginous medication must be continued a long time, under penalty of losing all the benefits derived. It must, moreover, be re-enforced by a substantial dietary regimen, and by the practice of hydrotherapy, which succeeds marvellously in these cases. But if the physician relax the rigor of the treatment all is lost; and yet he is sometimes obliged to compromise with his patient, who dislikes the medicine, who does not react well after the douche, or who does not tolerate the prolonged use of chalybeates. It is especially when the true palpitations predominate (I refer to the true in contradistinction to *pseudo*-palpitations, and pseudo-cardiodynias) that the means indicated end in failure. In these cases digitalis is contra-indicated; it troubles the digestive functions and destroys the appetite. Bromide of potassium causes a real enfeeblement after long continuance in its use. Arsenic sustains better the forces, but has no action on the palpitations. Iodide of potassium promotes menstruation and facilitates respiration, but does not correct rhythmical trouble of the heart when this trouble is due to poverty of the blood in globules or hæmoglobin.

This is the way I treat such cases. I cite the instance of a young girl, extremely chlorotic, who was referred to me for treatment by a distinguished London physician. My prescription was as follows: 1, Four times a day take 100 grammes of raw beef or mutton (preferably the latter), divested of fat, scraped and mixed with broth or pea-soup; 2, besides the raw meat, fish (fresh or salted) may be indulged in, and farinaceous vegetables; 3, for drink, water may be taken with a little brandy or wine; 4, daily ablutions of the whole body with fresh water; 5, sojourn in the country, and in a hilly region. I insisted on these details, which I consider very important. I recommended the raw meat because it is easy of digestion, and because the azotized principles of the muscular substance support the vital forces very much better than a milk and vegetable diet, and because the flesh and blood of beef and mutton contain iron combined with other principles.

Nervous palpitations.—We arrive at the diagnosis of these palpitations by way of exclusion, having eliminated the possibility of valvular or other cardiac lesions, and toxic and other alterations of the blood.

Having decided respecting the nature of the palpitations, new difficulties arise. Are they of the order of reflex nervous palpitations? Are they the expression of a general neuropathy, of a psychical trouble, or of a simple functional perturbation of the moderator or motor nerves of the heart? These questions must be answered before a rational system of treatment can be devised. It will not do to content one's self with vague theories of spasm (how high soever the authorities by whom those theories are supported), nor in practice will it do simply to ring the changes on antispasmodic remedies.

[1] The physician is often called upon to give medicine when it would be better to give food. One of the hardships which he is constantly obliged to encounter, is to treat diseases arising from mal-nutrition, when he cannot control the dietary of the patient.—TRANS.

[2] Les anæmies hypoglobulaires ou heteroglobulaires.

(a) *Reflex palpitations.*—Palpitations of reflex origin are neither so frequent nor so well demonstrated as one might imagine. Does the affection seem to be one of the digestive organs? About the only dyspeptic troubles that cause palpitations are the neuro-vascular dyspepsias and the verminous affections; the flatulent dyspepsias and the intestinal meteorisms act mechanically by displacing the heart and disturbing its functions, and are hardly to be taken into account. The true nervous dyspepsias are more difficult of cure, and the resulting palpitations are as obstinate as their cause.

The nervous disorders and the palpitations which are due to the presence of tænia in the intestines are perplexing, and the treatment is disappointing till the existence of the parasite is diagnosticated; the neuro-cardiac phenomena all disappear with the expulsion of the worm.

Palpitations of reflex origin may result from perturbations of the genital organs, or lesions of the womb.

Palpitations often affect pregnant women, women suffering from amenorrhœa or uterine fibrous polypi; they may depend on a reflex irritation from the spinal cord, causing constriction of the vessels, and changes in the intravascular pressure, troubling, possibly, in this manner the rhythm, or normal frequency of the pulsations. (The above is more a matter of theory than of demonstration.)

True nervous palpitations affect the hysteric, the hypochondriac, the neuropathic, or their source is of a psychical nature (emotions, etc.); or else they constitute a trouble of innervation without determined cause. To this last category belong palpitations called essential palpitations.

(b) *Hysteric palpitations.*—Is it a case of hysteria or hypochondriasis? If the palpitations are not really subjective, *i.e.*, are real and audible to auscultation, it is necessary before all to remove the mechanical causes, such as tympanites, flatulent dyspepsia, which press the diaphragm upward and displace the heart, or trouble its functions. If it be impossible to explain the palpitations by reflex action or mechanical causes, if they are strictly nervous, they come very near to being of the psychical kind (or even of the kind called essential), and the physiological mechanism and treatment would be the same. In fact, all palpitations belong exclusively to the domain of physiology, and cannot be treated seriously and scientifically till their intimate nature is understood. Are they of the nature of spasms? Antispasmodics are indicated; but what antispasmodics? Valerian, musk, assafœtida, camphor, orange-flowers, amber, the succinates? But who, I ask, has ever known any of these drugs to cure those continued grave palpitations which begin and are perpetuated without known cause? Is the heart ever susceptible of spasm—that is to say, of a contraction—either exaggerated in force or exaggerated in duration? In the first case exhaustion would soon take place; in the second, death. Suppose, however, that those precipitate beatings, which are not spasmodic, are the expression of excitation of the nerve-centres by a physical or moral cause. In this case the excitation can only act through the intermediary of the spinal cord; but the spinal cord causes the blood-vessels to contract, it also determines an increase of vascular tension, but not palpitations. All these palpitations are, on the contrary, veritable paralysis of the par vagum or moderator intra-cardiac ganglia. When these are fatigued or exhausted, a considerable disorder results; in fact, an enormous acceleration of the heart's pulsations. The treatment ought to be based on these data; indeed, empiricism did so base it before any explanation was sought.

These palpitations have been treated: 1. By digitalis, which augments the heart's energy and the vascular tension, and slows the pulsations. It is a powerful excitant of the moderator system of nerves. 2. By bromide of potassium, which moderates the peripheral circulation, and in this way, or perhaps directly, diminishes the exaggerated activity of the heart. If the palpitations are kept up by external sensory impressions acting reflexly on the heart, bromide diminishes the intensity of those sensory excitations by moderating the reflex spinal irritability. 3. Another remedy is veratrine, of which I shall speak when I come to treat of those grave palpitations which constitute the basis of Basedow's disease, and which seem to exhaust the heart and the patient. 4. Hydrotherapy, which in these cases is a method which is useful or dangerous according to the way in which it is applied, and according to the susceptibility of the patient.

Iron, despite its tonic power, is not of utility when administered for these palpitations, for the reason that they are not of hæmic origin. Iodide of potassium exasperates their intensity. This salt, indeed, improves the working power of the heart, but does not give tone to the paralyzed ganglia. Arsenic is preferable, but is not always sufficient.

We have never obtained any benefit from warm or cold baths or other hydrotherapic methods, nor even from mineral waters.

The sedatives—opium, belladonna, aconite, hydrocyanic acid—have always seemed to me to increase rather than diminish these paretic palpitations. This is easily understood. Belladonna, among others, paralyzes the moderator nerves and ganglia. The difference of action in these cases between the paralyzers and excitants of the moderator system of the heart—between belladonna on the one hand and digitalis on the other—suffices to justify our views of the paralytic nature of nervous palpitations, whether psychic or essential.

(c) *Palpitations called essential (chronic palpitations).*—There are some patients, females especially, who have palpitations for years, and after being long tormented by them, finish by living quite in harmony with the permanent disorder of their heart. I saw a short time ago a woman thirty-two years of age who had these functional perturbations for fifteen years, and to such an extent that on counting her pulse I reckoned 140 to 150 pulsations a minute, with occasional intermittences. Every kind of treatment having failed, the patient had given up all medication. She was in good health; the heart had not undergone either hypertrophy or dilatation. This fact adds to the proof—already ample—that palpitations do not exhaust the heart, and that even under the most discouraging circumstances we are warranted in giving a favorable prognosis.

A CASE OF TEARSTONE IN THE CANALICULUS OF THE LOWER EYELID.

By CHARLES J. KIPP, M.D.,

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CONCRETIONS, both fungoid and calcareous, are so very rarely found in the lachrymal passages, that the publication of the following case seems desirable.

Alfred B——, eight years of age, was brought to me for advice as to a painful swelling of the lower lid of his left eye. His parents stated that this eye had been "weak" for some years, but that the swelling had developed only within the last eight months.

This swelling was found to extend from the inner canthus to the punctum lachrymalis, and to involve the free edge of the lid. It was about the size and the shape of a French bean, and quite hard to the touch. The skin over it was red and œdematous, and the caruncle, the semi-lunar fold, and the conjunctiva of the whole lower lid were swollen and injected. The lower punctum was transformed into a nipple-shaped projection, about a millimetre in height, on the summit of which was a large crater-form opening, and was situated much farther from the inner canthus than normally, the canaliculus having nearly double its usual length. Pressure on the tumor caused a few drops of a whitish puriform liquid to escape from the punctum, which did not, however, materially diminish the size of the swelling. Exploration of the

canaliculus by means of No. 1 of Bowman's probes showed it to contain a stony concretion.

All doubts as to the nature of the affection having been removed by this exploration, I advised an operation for the removal of the obstruction, and consent having been given, I introduced a small Weber's knife into the canaliculus and split it in its entire length. An oval concretion of about the size of a pea was found lying loosely in the distended canaliculus and was lifted out without any difficulty. The mucous membrane lining the canaliculus was red and much thickened, and coated with thick pus. A probe could readily be introduced into and through the lachrymal sac from the canaliculus, and pressure over the region of the lachrymal sac failed to cause mucus or pus to escape from the sac into the canaliculus, thus showing that it was in a healthy condition. The distended canaliculus was thoroughly cleansed, the wound kept open for several days, and the patient directed to apply cold compresses to the lid. Under this simple treatment the tumefaction speedily disappeared, the wound closed, and two weeks after the little operation the eyelid was no larger than that of the opposite side. Since then there has been no return of the disease and the eye has ceased to be "weak."

The concretion was found to be of a grayish color in its outer layers, which were of a softer consistence than the nucleus, and were readily removed from it by a stream of water. The microscope showed this layer to be composed of pus-cells. The nucleus itself was of a whitish-yellow color, and was so hard that it required a pretty strong knife to divide it. It measured six millimetres in length and was about four millimetres thick. One half of the concretion was given to a chemist for analysis, who reported that it was composed of lime and magnesia, and carbonic and phosphoric acids, and some fatty substance. Examined microscopically, after decalcification the concretion was found to consist of a close network of very fine fibres, resembling in appearance very closely those of leptothrix buccalis. They could not, however, be stained blue by iodine.

From this description of the concretion it will be seen that it differed from those heretofore described by various authors in this, that in addition to the leptothrix elements it contained an unusually large quantity of earthy salts.

Masses of leptothrix have been found in the lower canaliculus by v. Graefe,[1] Förster,[2] and Narkiwiecz-Iodko[3]; and in the upper canaliculus by Schirmer,[4] Del Monte,[5] and Gruening.[6] In several of the cases a number of concretions were found together, and in all were the concretions of a cheesy consistence. Although the fungoid nature of these concretions was pointed out by v. Graefe as early as 1854, it was not till 1869 that Waldeyer,[7] Cohnheim,[7] and Leber,[7] demonstrated that this fungus was a leptothrix. The identity of the plant found in the canaliculus with that of leptothrix buccalis is, however, not yet fully settled, I think, as in none of the cases except Gruening's could the fungus be stained blue by iodine. The only attempt to cultivate the fungus was, as far as I know, made by Gruening, who found, forty-eight hours after placing fragments of the concretion in glycerine, that they were surrounded by filaments of penicilium which extended to a layer of penicilium spores floating on the surface of the glycerine.

Fungoid concretions are, however, not the only ones found in the canaliculi, as is shown by Pagenstecker's[8] case, in which a stone containing no leptothrix was removed. Whether in the tearstone removed by Desmarres,[9] leptothrix formed the basis of the concretion is not known; otherwise it very closely resembled the one here described.

How the leptothrix gets into the canaliculi is not known, but it seems not improbable that it is accidentally introduced into the puncta, the same as other foreign bodies, such as cilia, bits of straw, and the like, which are occasionally found here. To persons who are in the habit of wetting the edges of the lids with saliva for the removal of crusts, etc., such an accident might happen readily enough.

As regards the diagnosis of concretions in the canaliculi but little need be said. The introduction of a fine blunt-pointed probe into the canaliculus, after the punctum has been somewhat dilated by a conical probe, will in all cases and in all stages settle the diagnosis at once. The only affection for which it could possibly be mistaken, after it has given rise to inflammatory swelling of the tissue surrounding the canaliculus, would be a furuncle—a very rare affection in this part of the lid—and thus it will be readily distinguished by the history, by the elongation of the canaliculus, and the enlargement of the punctum.

The treatment pursued in the case above reported is the one to be recommended for all cases.

[1] Archiv. f. Ophthalmologie, bd. i., p. 284; also bd. xv., p. 324.
[2] Ibid., bd. xv., p. 318.
[3] Klinische Monatsb. f. Augenheilkunde, bd. viii., p. 78.
[4] Ibid., bd. ix., p. 248.
[5] Nagel's Jahresbericht, 1872, p. 434.
[6] Archives of Ophthalmology and Otology, vol. iii., p. 17.
[7] Arch. f. Ophthalmologie, bd. xv., p. 318-342.
[8] Archives of Ophthalmology and Otology, vol. ii., p. 219.
[9] Annal. d'Oculistique, viii., p. 85.

REPORT OF TWO CASES OF STRANGULATED FEMORAL HERNIA WITH OPERATIONS—RECOVERY.

By ALFRED NORTH, M.D.,
WATERBURY, CONN.

Case I.—Mrs. John H——, of Waterbury, aged forty-two; has borne six children; health always good. A tumor about the size of an almond appeared in the right femoral region about two years ago, with no marked symptoms at the time of its appearance. Patient supposed it to be an enlarged gland. One year ago the patient was suddenly seized with severe colicky pains on retiring to bed. The pains were chiefly in the right inguinal region, lasted two to three hours, then disappeared. Slept soundly after this, and woke next morning well. During the last year the tumor has caused no inconvenience. Noticed that on standing much or lifting, it grew longer, but after a night's rest returned to its former size. It has never been reduced since its first appearance. It has recently acquired about the size of an English walnut.

I was called to see the patient first on Sunday morning, June 24th. She had been suffering since 2 A.M. with severe nausea and vomiting. The matter vomited was rather greenish in color, but free from fecal odor. Bowels had not moved for several days. Features somewhat pinched.

On examination I found a tumor of the size of an English walnut in the right femoral region, and traced its neck up under Poupart's ligament. It yielded no impulse on coughing and no resonance on percussion. Slight reduction effected by prolonged taxis, but nothing further could be accomplished. Ordered opium and camphor, āā gr. j. q. 4 h., and ice-bag over tumor. Pulse, 120; temperature, 100°. P.M.: Morning symptoms aggravated. Bowels have not acted. Matter vomited has fecal odor and appearance and (to patient) a fecal taste. Temperature, 100½°; pulse, 120. Pills continued. Soap-suds enemata ordered.

Monday, June 25th.—Symptoms increased in severity. Vomiting persistent, but not stercoraceous to-day. Pain more severe. Bowels have not moved. Tympanites of abdomen. Ordered enema of ol. olivæ.

Tuesday, June 26th.—Patient seen by Dr. Axtelle in consultation. Temperature, 101½°; pulse, 120. Face more pinched; eyes sunken and dull; cheeks hollow and flushed. Bowels have not acted. Vomiting of bile-stained fluid with slightly fecal odor is persistent.

It was decided to give ten grains of calomel with sodæ

bicarb., to be followed in four hours with two ounces of ol. olivæ and one pint of soapsuds per rectum and to be governed by the result as to the question of operative procedure. 10 P.M.: Temperature, 102°; pulse, 125. Bowels have not moved. Patient worse and sinking. Gave full turpentine enema in knee-chest position. This escaped in ten minutes without a trace of fecal matter. Decided to operate at once. At 12 P.M. the patient was etherized and I proceeded to operate with the assistance of Dr. Axtelle. Seized the tumor firmly and cut obliquely from the external abdominal ring, downward and inward about two and one-half inches, the point of strangulation being at the junction of the upper and middle thirds of the incision. The skin having been separated, all tissues beneath were carefully cut upon a director until the hernial sac was reached. This was about the size of an English walnut; its body was perfectly non-adherent, but the neck was adherent entirely around.[1] These adhesions were carefully broken and cut upon the director. At this stage the neck of the sac, which had been drawn out, was accidentally torn through on the proximal side of the constricting band. The entire sac was then carefully opened by the fingers and a knuckle of intestine about the size of a walnut was found strangulated, of a blackish-red color and adherent to the sac. This was carefully separated by the fingers.

The strangulated knuckle had the appearance of initial gangrene, but on close examination the results were seen to extend across the line of constriction. Sponges saturated with warm water were applied to this and soon its vessels became more injected and its color redder. Everything was thoroughly cleansed, the intestine returned, and the index finger swept around the opening, but no adhesions were found. The hernial sac was then seized and put on slight tension. The neck of the sac was stitched across with cobbler's stitch and the ends firmly tied, then brought back and tied on the opposite side, so as to include the entire neck by the latter loop. The sac was then excised beyond ligature.

The external wound was closed in the ordinary manner with silk sutures, a drainage-tube extending through, and dressed with a compress and bandage. It was necessary to inject half an ounce of brandy hypodermically during the operation to reinforce the heart's action, which became very weak.

The operation occupied two hours, and the patient was removed to bed at 2 A.M. with pulse 100 and temperature 99½°. Hot bottles of water were applied to feet and sides; ordered small pieces of ice in the mouth if she complained of thirst. Gave twelve minims of Magendie's solution of morphia hypodermically.

Wednesday.—7 A.M.: Temperature, 104°; pulse, 116; respiration, 14. Slight tympanites; no pain; features less pinched; feels better. No vomiting on coming out of ether. Decided to treat as after ovariotomy. Ordered the following enema every six hours:

℞.	Quin. sulph.	gr. v.
	Acid. sulph. aromat.	gtt. v.
	Liq. opii comp.	gtt. xl.
	Spts. vini Gallici	℥ ss.
	Beef-juice	℥ jss.
℈ M.	Sig.—Enema every six hours.	

Abdominal ice-water coil applied. No nourishment to be given by mouth. 2 P.M.: Temperature, 103½° in vagina; pulse, 116. No nausea. Looks and feels better. 8 P.M.: Temperature, 103½° per vaginam; pulse, 116. Condition and treatment same.

Thursday, 28th.—5 A.M.: Did not sleep during night. Temperature, 104° by vaginam; pulse, 120. Gave ten minims of Magendie hypodermically. After this she slept four hours. Ordered two drachms of iced milk by mouth every two hours. 6 P.M.: Temperature, 103° per vagina. Flatus escapes freely by bowel and mouth. No nausea, no pain. Pinched look disappearing from face. Retains milk and beef-tea.

Friday, June 29th.—9 A.M.: Temperature, 101½° by vagina; pulse, 90. Begins to call for food. No nausea. Nutritive enemata continued every six hours. Abdominal coil still on. Slept five to six hours during night. Eyes brighter and face less pinched. Bowels passed a thin, aqueous, yellow, fecal fluid at 9.10 A.M. To take half an ounce of milk or beef-tea by mouth every half hour. 6 P.M.: Bowels moved again. Slept during day. Temperature, 101½° by vagina. Good appetite.

Saturday 30th.—11 A.M.: Temperature, 100½° by vagina. Quinia and sulphuric acid omitted from enemata. One ounce of nourishment to be taken by mouth every half hour. Slept well. 6 P.M.: Temperature, 101°. Doing well.

Sunday, July 1st.—10 A.M.: Temperature, 99½° per vagina. Slept well; appetite good. 6 P.M.: Temperature, 99½° by vagina; 98½° by mouth. Bowels moved at 11 A.M. Coil taken off for the first time; appetite good. Doing well.

Monday, July 2d.—8.30 A.M.: Temperature, 100½° by vagina; 99½° by mouth. Coil off all night; slept well. Nourishment by rectum stopped; appetite good.

Tuesday, July 3d.—9 A.M.: Temperature, 100° by vagina. The wound has been washed out four times daily with solution of carbolic acid. To-day the tube was taken out and wound dressed with balsam Peru. Suppurating moderately. Slept well. Appetite not so good; tongue coated and bowels flatulent. Ordered mist. rhei et sodæ, ℥ ss. every six hours.

Wednesday, July 4th.—Temperature, 98½° by mouth. Bowels have not acted. Doing well. Nourished entirely by mouth.

Thursday, July 5th.—Pulse and temperature normal. Appetite good. Sleeps well. Two actions of bowels since last call; as bowels are constipated ordered a dose of rhubarb.

Friday, July 6th.—Temperature, 98⅘°; pulse, 84. Bowels acted three times after taking rhubarb. Doing well. Wound suppurating, but healing fairly well.

July 12th.—Wound almost healed. Bowels normal. Appetite good. Sleeps well. Looks and feels well. Sits up to-day for first time.

July 18th.—Wound healed and patient up and walking around.

July 21st.—Patient perfectly well, and to-day went to Peekskill, N. Y., to visit friends.

The two points to which I desire to call attention in this case are: first, the returning to the abdominal cavity of intestine at such an advanced stage on the way to gangrene; and second, the manner of obliterating the hernial sac.

CASE II.—G. F——, German, aged fifty-two; always healthy until ten years ago; has been a caster in a metal foundry for past twenty-five years.

Patient states that about once a year for the last ten years he has been suddenly attacked with severe pains in bowels of a crampy character—with severe vomiting, lasting twenty-four to forty-eight hours or longer (patient attributed these attacks to the fumes from molten spelter, which is a kind of impure zinc containing copper, iron, arsenic, etc., he being constantly exposed to these fumes). Aside from this has always been well. Has never had hernia or any tumor of any kind.

Patient was taken in the manner described above about noon of Saturday, January 21, 1882. Attack was so severe that he had to leave work. During—or before—this attack a tumor appeared for the first time in the left femoral region. He stoutly affirms that the tumor had not existed previous to attack. I was first called to see patient early Sunday morning, January 22d. He then stated that he was suddenly attacked about noon of the previous day with severe cramps in bowels and vomiting, which was very severe and persistent, affording relief for but few minutes. These paroxysms had continued all

[1] The constriction was found to be the neck of the sac.

night without sleep. Had not sent for a physician because he supposed the attack to be like the previous ones and due to the same cause. Thought he had been in same condition many times before. When asked if he had ever had hernia or a tumor of any kind in groin, he positively stated that he had not. Not finding a satisfactory explanation otherwise for the symptoms, I made a thorough physical examination and found in the left groin, apparently at junction of inner and middle thirds of Poupart's ligament, a tumor about two-thirds the size of an English walnut, which yielded no impulse on coughing, no resonance on percussion, apparently solid and having the feeling of glandular tissue. I should certainly have regarded it as an enlarged gland in the absence of the existing symptoms. As it was, I regarded it as a hernial protrusion, and ordered an ice-bag to be applied to it, and one grain of opium to be taken every four hours. Taxis failed.

Called again at 6 P.M. and found the symptoms all much increased in severity. Features markedly pinched; vomiting stercoraceous; bowels had not been moved, although repeated large enemata had been administered since previous call. I urged an operation, as I had found all efforts at reduction to be fruitless, but patient replied that he did not want "to be cut up alive." Enemata, ice-bag, and opium continued.

At 3 A.M. on Monday morning was summoned to patient in haste, and found that stercoraceous vomiting had continued all night, pain and prostration were very great. He was begging for an operation or anything that would relieve him. Assisted only by my student and the feeble light of two kerosene lamps, I proceeded to the operation. Patient being etherized, a final effort at reduction was made, but failed. Then proceeded to operate in the usual manner. The skin being cut through, the deeper tissues were carefully and slowly separated upon a director. Hernial sac having been reached, the peritoneum was found to be perfectly normal, absolutely free from thickening or inflammation, and the hernia to be recent.

On careful search, the point of constriction was found to be at Gimbernat's ligament. This was carefully cut upward and inward as far as deemed necessary, but failing still to reduce, it was cut a second time. A second attempt at reduction failing, I introduced the point of the index finger and stretched the opening until reduction was readily accomplished. The index finger was then introduced into abdominal cavity and swept entirely around, but no adhesions found. The hernia was reduced *en masse*, the sac not being opened.

The wound was closed with silk sutures, the sutures being deep, and an attempt being made to pass them through the margins of the ring and thus effect a radical cure. This latter point probably failed. No drainage-tube was used. A compress and bandage as usual.

For the first four days the wound seemed to be healing by first intention. At this time it was found that a deep abscess had formed. This was freely opened and a drainage-tube inserted. Treated subsequently after the ordinary manner of open wounds. Treatment as to food and anodynes was such as is ordinarily adopted after abdominal surgery. Improvement was gradual after recovery from shock of operation. Flatus escaped from bowels immediately after operation. Appetite gradually returned and nausea soon disappeared. Bowels did not act till fifth day and then with no cathartic.

Discharged patient as cured on February 7th.

Ordered a truss for him on February 20th, which he has been wearing since.

July 27, 1883.—Patient has been wearing the Otto elastic truss from time of recovery until July 4, 1883, when being on vacation from work and supposing the truss to be only necessary during labor, he removed it and left it off three or four days. During this time the hernia reappeared again for the first time. The truss was replaced and has kept the hernia in place since, but it still returns on removing the truss, especially when he coughs.

Progress of Medical Science.

STENOSIS OF THE PYLORUS RELIEVED BY DIGITAL DILATATION.—The following case was reported by Professor Loreta to the Academy of Sciences of Bologna: The patient, a man forty-seven years of age, had suffered for the greater part of twenty years from imperfect digestion, distention of the stomach, sense of weight, and occasional vomiting. In 1878 he was admitted into the Bologna Medical Clinic, and treated for ulcer of the stomach. Relief ensued, but only for a short time. Eructation, a burning feeling in the throat, vomiting of undigested food, sometimes mixed with blood, increasing emaciation, and pallor of the skin and mucous membranes were noted. The man subsisted on a little milk. The distended stomach gave a clear note on percussion from the fifth rib to the umbilicus. Microscopic examination of the fluid drawn by pump from the stomach yielded no evidence of organic lesion. On palpating the emptied stomach, a tumor could be felt in the pyloric region, with smooth and elastic surface, but not very well defined limits. As the patient was steadily sinking, it was determined to resort to operation. The stomach was first washed out with an alkaline solution. The incision into the abdominal wall was commenced a little to the right of the linea alba, and extended outward and downward for six inches; the lower angle was an inch and a quarter from the ninth right costal cartilage. The omentum was extensively adherent by old inflammatory exudations. These were separated very slowly and carefully from the abdominal wall and from the surface of the stomach. This viscus was then drawn out through the wound, and the operator felt the pylorus much enlarged and of fibrous hardness. In the space between the two curves of the stomach, and at a distance of an inch and a quarter from the pylorus, an opening was made into the viscus with a stout pair of scissors through a transverse fold previously raised. The opening into the stomach was extended two inches and a half, and T-shaped forceps were used to arrest bleeding from the edges. The right index-finger was then passed into the stomach toward the pylorus, which was completely closed. The finger failed to pass into the duodenum, in spite of considerable pressure and combined lateral and rotatory movements. The left index-finger was then introduced into the stomach and used to fix the pylorus, while strong and renewed pressure was exerted to push the first phalanx of the right index into the narrow and contracted pylorus, which was then drawn forward to the external wound. Along the right index-finger the left one was also introduced into the pylorus, but these attempts failed to pull one finger from the other in spite of much force, sustained as long as possible. After resting, the operator resumed his efforts and dilated the pylorus, though he only succeeded in doing so very slowly, and by employing very great force. The dilatation was continued to about three inches. The stomach wound was then sutured with carbolized silk, the viscus replaced in the abdominal cavity, and the external wound closed with seven silver sutures. The patient was returned to bed thirty-three minutes after the commencement of the operation. On regaining consciousness he complained only of thirst and of a slight burning sensation at the wound. Small pieces of ice were given from time to time. In the afternoon the patient complained of weakness and hunger, and relished the yelk of an egg beaten up with Marsala wine, given in teaspoonfuls every half hour. The temperature throughout the day was 98°, pulse 72, respiration 26. The same kind of diet was continued. The third day after the operation the bowels acted after an enema, the fourth day some broth and light paste were allowed, the fifth day some chicken, the sixth day bread was added to the diet. On that day the bowels acted spontaneously. The wound was first

dressed on the eighth day, and five sutures removed. The incision had healed by the first intention. The two remaining sutures were removed on the eleventh day. The thirteenth day after the operation the patient's diet consisted of coffee and milk, bread, roast chicken, roast beef, eggs, and wine. He was out of bed for two hours and a half on the sixteenth day, and rapidly gained flesh and strength. Two days before the operation the man weighed one hundred and twenty-two pounds, and gained about thirty-three pounds in six weeks. He continued to enjoy perfect health when presented to the Bolognese Academy after the lapse of five months. Professor Loreta subsequently performed a similar operation in another case, and with equally good result; but in this instance he experienced much less difficulty in dilating the pylorus.—*The Lancet*, August 18, 1883.

THE CAPILLARY PULSE.—Quincke and others have called attention to a rhythmical dilatation of the capillaries, occurring synchronously with the heart-beats, in certain morbid conditions, or even in certain individuals in a state of apparent health. This pulse is seen most readily under the finger-nails, and has also been observed in the retina. It is most marked in slightly anæmic persons, and especially in sufferers from aortic insufficiency, though in neither case is it of constant occurrence. Dr. Albert Ruault, writing in *La France Médicale* of August 4, 1883, mentions a method by which this phenomenon may be conveniently studied. The head of the patient is firmly held in a suitable light, and then the forehead is rubbed for an instant by the flat of the finger-nail. If, now, the patient is the subject of a capillary pulsation, the white spot in the forehead will become reddened at the moment of cardiac systole, and at the same time the integument will be visibly elevated. M. Ruault observes that this phenomenon is nearly constant in cases of aortic insufficiency when the heart beats regularly and forcibly, but it is usually absent if the heart-action is irregular and feeble. Recent researches of Franck have shown that the mean arterial pressure in aortic regurgitation, so far from being diminished, is equal to, or greater than the normal. This indicates that the arterial system is in a state of tension. Now, says the author, if a momentary vaso-motor paralysis be produced by drawing the nail across the forehead, the blood will be forced into the network of dilated capillaries at the moment of systole, and the skin will be reddened with each pulsation. This phenomenon is only met with in those pathological conditions in which there is an increased cardiac impulse, and, at the same time, a general arterial contraction. Aortic insufficiency, arterial sclerosis, and certain forms of anæmia are the conditions noted by the author as those in which the frontal capillary pulse is most readily observable.

RISE OF BODILY TEMPERATURE AFTER SIMPLE FRACTURES.—Dr. Grundler has been making a series of thermometric observations in patients suffering from uncomplicated fractures, and found in every case but one of those examined, a rise of from 2° to 4° F. above the normal. The degree of fever is in proportion to the size of the broken bone, and to the degree of extravasation. The highest temperature observed (102.5°) was in a case of fractured femur, and the lowest (100.5°) in fracture of the forearm. The rise began on the evening of the first day, and reached its highest point on the evening of the second to the fourth day.—*Centralblatt für Chirurgie*, August 11, 1883.

A POST-MORTEM CATALEPTIFORM STATE.—Brown-Séquard states that he has observed a peculiar cataleptiform condition in the muscles of the legs in pigeons, after having made a cross section of the cerebral hemispheres, the optic thalami, the cerebellum, the medulla oblongata, or the cervical portion of the spinal cord. It occurs likewise after a crushing of the head. In a short time, usually in less than fifteen minutes after death, the condition manifests itself, so that the leg will remain fixed in any position in which it may be placed, even though it be opposed to the force of gravity. It has nothing to do with rigor mortis, and comes on earlier than that. It is produced most speedily after the head has been crushed. Neither the spinal cord, nor the motor nerves, nor the terminal motor plates are concerned in its production. There is rather, according to the author, a direct action of the central nervous system upon the muscles, the nature of which he hopes, by further investigations, to elucidate.—*Centralbl. für Klin. Med.*, August 18, 1883.

RECOVERY AFTER THE PASSAGE OF A RAMROD THROUGH THE BRAIN.—Dr. G. Fisher reports an instance of recovery after severe injury to the brain, which recalls the well-known case of Dr. Harlow, of Vermont, in which a tamping-iron was forced through the head by a premature explosion. In this case, an iron ramrod was discharged during the loading of a gun. It entered the back to the right of the fourth dorsal vertebra, passed upward along the ribs, and through the muscles of the neck, and forced a passage through the skull and the brain, projecting out nearly twelve inches from the left side of the head. An incision was made in the neck, and the ramrod was forced back by a hammer and extracted through the wound thus made. The patient recovered, but lost the sight in the right eye. A ramrod being propelled in the same direction through a dead body, it was found that in its course through the neck no important nerves or vessels were injured. The instrument passed through the right optic foramen, tore the optic nerve, and passed through the fissure between the frontal lobes. The destruction of brain-substance in this region was only a little over an inch in extent, and was confined to the anterior portion of the left frontal convolution. According to our present knowledge, such an injury should cause no motor or sensory disturbances. The author apprehended the appearance in time of insanity as the result of the accident.—*Centralbl. für Klin. Med.*, August 18, 1883.

EUCALYPTUS IN THE TREATMENT OF GANGRENE OF THE LUNGS.—Dr. Bonamy relates the case of a man, about fifty years of age, who was admitted to hospital suffering from cough, dyspnœa, and fever. A few days after admission the fetid odor of his breath became so extreme that it was necessary to separate him from the other patients. There was dulness in the axillary line on the left side over the middle portion of the lung. At this point there was tubular respiration and crepitant râles were audible at the end of inspiration. The sputa consisted of a black matter, detached portions of which were swimming in an abundant serous fluid. The cough was incessant, and the odor intolerable. A diagnosis was made of gangrene of the lung of superficial extent. The patient was first put upon a mixture containing carbolic acid, but no improvement following, this was replaced by tincture of eucalyptus. In two days after the last prescription the odor of the breath was much less offensive, and in less than two weeks the patient was cured. —*Le Courrier Médical*, August 18, 1883.

TREATMENT OF GRANULAR LIDS.—Dr. Arnoux claims to have met with great success in the treatment of granular lids by the following simple method: The lid is everted and wiped dry with a piece of blotting-paper. The granulations are then touched very lightly with a crystal of sulphate of copper, and immediately after a smooth cylinder of zinc is passed over them. Then the conjunctiva is carefully dried again, and, as far as possible, the impalpable black powder, which remains after the operation, is removed. The lid is then replaced, but not allowed to touch the ball of the eye for a minute or two. No subsequent cold applications are necessary, as there is little reaction if the operation be delicately performed.—*Gazetta Medica di Roma*, August 1, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 15, 1883.

PATHOGENY AND TREATMENT OF APOPLEXY.

THE old word apoplexy (Greek, a stunning blow or shock) has been retained by most writers on internal pathology to represent a congeries of symptoms due to serious interruption of the encephalic circulation. Though formerly, owing largely to the influence of Rochoux, limited to interstitial hemorrhage, and consequently applied to the rupture of blood-vessels in any organ of the body, it now denotes, in the usage of the best authorities, the sudden suspension of cerebral action produced by an internal cause affecting the circulation (vascular rupture, congestion or anæmia) and acting directly on the encephalon.[1]

Rochoux's numerous observations as to the pathogeny of apoplexy had led him to conclusions more positive and rigorous than his predecessors, Morgagni and Hoffmann, had ventured to entertain. The latter recognized in cerebral hemorrhage the principal, but not the only cause of apoplexy; there had been cases in the experience of these older pathologists (and Morgagni may be said to be the founder of pathological anatomy) where the necropsy revealed nothing but an excess of serum in the ventricles, entailing, in their judgment, paralysis from pressure; other cases disclosed no appreciable post-mortem lesions, and it was found necessary to admit the existence of "nervous" or "essential" apoplexies.

The dominant influence of Rochoux and his anatomo-pathological studies for a time threw doubt and discredit on the so-called essential apoplexies, and it was held that intra-cranial hemorrhage, or intense congestion with hemorrhagic tendencies, was always the antecedent of the true apoplectic ictus. The first work in which public attention was directed to arterial thrombosis as a cause of local gangrenes and softenings was that of Hodgson, on "Diseases of the Arteries," published in 1814. Later, and within our own epoch, came the valuable discoveries of Virchow, Panum, and Lancereaux, relative to embolism and thrombosis, and other causes of local ischæmia; and now to apoplexy from hemorrhage or from hyperæmia we must add apoplexy from anæmia. Of still later date is the startling discovery of Charcot and Bouchard that cerebral hemorrhage owes its most frequent origin to the presence in the arterioles of the cerebral hemispheres or basal ganglia, of miliary aneurisms, the result of chronic periarteritis and softening of the middle coat.

[1] Schützenberger.

However various the conditions which give rise to the apoplectic seizure, they are all reducible in last analysis to some circulatory disturbance. The heart under hypertrophy or excitement may send too much blood to the brain, and arterioles or capillaries may give way, and an interstitial extravasation disorganize nerve-fibril and nerve-protoplasm by the very fluid destined to nourish their histological elements. This accident is more likely to take place if the encephalic vessels are enfeebled from malnutrition or disease; and endarteritis and periarteritis with resulting calcareous and atheromatous degenerations, and multiple miliary aneurisms, favor the production of hemorrhage. All inflammatory and degenerative lesions of the endocardium and blood-vessels also predispose to the formation of clots, constituting emboli or thrombi, which may cause sudden obstruction of some intra-cranial vessel, with all the ensuing apoplectic phenomena.

As a typical example of apoplexy, we will take a case of hemorrhage into the left corpus striatum. An important motor ganglion, a halting-place, as it were, for the reinforcement and co-ordination of all voluntary impulses emanating from the cortex, a ganglion, moreover, in which all the muscular groups of the body have their representative elements, is all at once deprived of blood by rupture of its nutrient artery. So far it is in the same condition as though its arterial supply had been cut off by an obturating clot. In both cases function must cease, and necrobiosis occur, except so far as collateral circulation may restore the loss. In the hemorrhagic form there is a double lesion, the interrupted circulation and the extra-vascular clot, irritating, lacerating, and compressing nerve-fibrils and nerve-cells. Hence the "shock" resulting from hemorrhage is generally more conspicuous than the shock from infarction (by autochthonous or migrating clots). Certainly in the one case an initial coma is the rule, in the other it is the exception. There is right-sided motor, perhaps also for a time sensory hemiplegia, and there may be aphasia, whether from interruption of the channels of transmission of the voluntary influx destined to the muscles of phonation and articulation, or from involvement of Broca's convolution. According to McLane Hamilton, the face will be paralyzed on the same side as the arm and leg. There is also coma, which is generally temporary. What causes the sudden loss of consciousness? This is a problem over which physiologists have wrestled. The best explanation we can give is that the local paralyzing lesion has reflexly inhibited the hemispheres also. It is the radiation to the conscious intellectual centres of the basal irritation.

As for the frequency of apoplexy, it is one of the most common causes of death in old people. The liability progressively increases from twenty upward; cases under twenty are very rare. Of sixty-nine cases collected by Rochoux,[1] fifty were beyond the fiftieth year. What percentage of people in advanced life actually die from apoplexy it is difficult to determine, deaths from this disease being recorded in city registers as deaths from paralysis (a term by no means synonymous with apoplexy, though in popular usage regarded as such), and sudden death from heart disease being every day (for want of an autopsy) referred to apoplexy.

[1] Rochoux: Rechèrches sur l'Apoplexie. 1814.

The most unobjectionable classification is as follows: 1, Congestive Apoplexy; 2, Hemorrhagic Apoplexy; 3, Ischæmic or Necrobiotic Apoplexy. The pathogeny of the last two forms has already been touched upon. In congestive apoplexy there must be something more than simple cerebral hyperæmia to account for the symptoms; there must be an absolute stasis in the capillaries and veins, during which rupture is imminent. The pathological condition, then, producing coma, resolution, and paralysis, is one of suspension of function from interruption of the nutrient circulation, assisted, it may be, by pressure of the engorged blood-vessels on nerve-centres and conducting strands.

The old division of serous apoplexy may as well be banished from internal pathology, as it is doubtful if serous effusion alone ever gives rise to apoplexy.[1]

As accurate diagnosis is essential to exact treatment, so it would seem desirable that the physician when called to a case of apoplexy should know what kind he has to treat. Is it congestive, hemorrhagic, or ischæmic? He has (we will suppose) ruled out narcotism, alcoholic intoxication, syncope, and hysterical as well as epileptic coma. When the coma soon subsides without leaving paralysis, it may be inferred that the attack was of the congestive kind; the march of the affection points out the diagnosis. Moreover in apoplectiform congestion, as Racle[2] has shown, the jugulars and veins of the face are distended, the whole brain is engorged with blood; the symptoms are generally cephalalgia, obtuseness of the senses, enfeeblement of the muscular functions, but true paralysis is wanting.

Between apoplexy from hemorrhage and apoplexy from an intravascular clot the diagnosis is more difficult, for the symptoms of the two forms are often identical. If the patient is old, and has beady, calcareous arteries, the presumption is that arterial thrombosis is the cause. The presumption is strengthened if, as before indicated, and as Todd, Trousseau, and Alexander Robertson long ago pointed out, there has been sudden complete hemiplegia without loss of consciousness. The presence in the patient of the tuberculous or cancerous cachexia would favor the hypothesis of thrombosis. A limitation of the paralysis to one arm, a leg, or to the face would indicate vascular infarction rather than hemorrhage. Recamier laid down some rules of diagnosis, to which unfortunately there are very many exceptions. Contracture of the paralyzed members, anæsthesia of the same parts, and enfeeblement of the intelligence, pertain to hemorrhage; complete resolution of the paralyzed members, conservation of sensibility and intelligence, to ramolissement. According to Charcot, aphasia belongs almost exclusively to ramolissement. Embolism is more commonly met with in young patients and in the great majority of cases coincides with valvular disease of the left heart; it comes suddenly without prodromata, the paralysis is hemiplegic, the peripheral arteries are healthy, and there are often signs of obstruction in other viscera, notably the spleen, which is enlarged and painful.[3]

Such are some of the diagnostic points, but, as before said, there will be many cases where you cannot be certain in your diagnosis.

Only one or two points connected with treatment demand consideration here. Prophylactic treatment can do but little to prevent the manifestation of the more serious forms of apoplexy. We are as powerless to retard atheromatous degenerations as we are to arrest senile decay. The patient with hypertrophied heart and diseased arteries should lead a quiet, temperate life. Remedies, such as purgatives, salines, and veratrum, which diminish arterial tension, may be indicated as prophylactics whenever there is reason to fear apoplexy. The same remedies are also indicated at the time of the attack. Cold applications to the head are also of utility, and the same may be said of warmth to the feet; sinapisms may be applied to the extremities if due caution be exercised. Bleeding should never be employed in the grave forms, and it is only indicated, and that, perhaps, rarely, in the congestive form. Sometimes venesection may be the speediest means of reducing high arterial tension, and preventing hemorrhage. Purgatives may always be tried in congestive apoplexy, and very generally they will be found to be beneficial. When there is reason to believe that hemorrhage has taken place, there are no medicaments by which we can with certainty moderate or arrest the sanguineous extravasation. If an artery have undergone occlusion we can neither promote removal of the clot, nor prevent the resulting necrobiotic softening. There is no sufficient evidence that the large doses of ergot and bromides, too indiscriminately used in all cases of apoplexy, do any good, and the same may be said of the free use of strychnia for the resulting paralysis.

[1] Flint: Prac. Med., p. 576.
[2] Guide Clinique, 1866, p. 94.
[3] Jaccoud: Path. Interne, t. i., p. 148.

KERN'S CATAPLASMATA IN THE TREATMENT OF LYMPHO-SARCOMATA.

In an article published in The Record last spring we mentioned some facts regarding the efficacy of Kern's poultices in lympho-sarcomata. We have since had many inquiries regarding the matter, and therefore take pleasure in presenting the substance of a lecture upon this subject delivered by Professor Busch, of Bonn. Professor Busch recounts the failures which he had experienced in treating malignant sarcomata with the knife, by electrolysis, and by injections of various kinds. He had learned to recognize the value of Kern's cataplasms when a young physician in the military hospitals, where he had often seen obstinate buboes melt away under their use. These cataplasms are composed of one part mustard-flour to five parts of black soap, the whole being enclosed in a gauze bag, and applied daily over the tumor for four or five hours or longer. A very intense irritation, amounting almost to an erysipelas, is produced. The sarcomatous tumors, if fresh, soften and disappear. The results of this treatment are best shown by giving the history of a case of progressive lympho-sarcoma as described by Professor Busch:

"The patient, a very powerfully built man of thirty-five, had noticed in the beginning of July a hard swelling beneath the left angle of the lower jaw. He used water applications, presuming it to be a tonsillitis. But as the tumor grew he sought medical advice, and at first inunctions of mercurial ointment, linseed poultices, arnica, and

poppy-seed were applied. On August 13th I was called in to examine the patient and was frightened to see the appearance of the man, who two months prior had been in the best of health. An immovable tumor extended from the middle line of the neck to the vertebral column, from the inferior maxillary bone to the internal half of the clavicle. The larynx was pushed to one side of the middle line and the sternal extremity only of the sterno-cleido-mastoid muscles was discernible. The pulsations of the carotid could not be perceived at its proper place, as it was surrounded on its whole course. The pains of the occipital region and vertex, so characteristic in these tumors, were felt by the patient. They were occasioned by the great stretching of the posterior auricular and occipital magnus nerves. The voice had become somewhat hoarser, as the result of pressure upon the pneumogastric or recurrent nerve. With these symptoms, and in the presence of the very rapid growth of the tumor, I could only express my opinion that in all probability the patient's life would be terminated within a few weeks. If I advised any remedy, it would be the poultices of Kern. Possibly they would not benefit a great deal in this case, and should this be the case in a few days they would be discontinued. Next day I took my vacation-trip and left the patient in charge of Dr. S——, who relates to me the succeeding events. The patient endured the poultice (one to five) very well, so that (instead of having it applied, like the other patients, for four to five hours) he let it remain upon the tumor for twelve hours. In the evening the cauterized region was covered with vaseline and cotton and morphine given internally. Already on August 27th, fourteen days later, an evident diminution of the tumor and greater mobility was ascertained. The cataplasmata were continued for four weeks and iodide of potassium (5 to 200) given per os. After the tumor had completely disappeared, small quantities of iodoform were brushed upon it. I saw the patient, whom I did not suppose to be still among the living, on October 3d, cured."

Professor Busch is inclined to attribute the powerful action of this remedy to the erysipelatous irritation produced by it. Professor Binz, to whom he communicated this view, thought that the oil of mustard, penetrating the softened skin, might also be a factor. At any event, the result appears as undeniable as it is extraordinary. It is not likely that all cases even of fresh tumors would have so happy a termination. It is not stated whether the tumor returned.

POWDER OF BEEF-BLOOD AS AN ALIMENTARY PRINCIPLE.

Our ideas of nourishing invalids with irritable and weak digestive powers have been somewhat revolutionized of late years by the remarkable results of Débove and Dujardin-Beaumetz with their methods of forced feeding; and they have clinically demonstrated that proper nourishment plays no unimportant part in the therapeutics of certain chronic and convalescent states. The indications for forced feeding are presented very frequently in practice, much more frequently, indeed, than many will allow.

Though the cases in which Dujardin-Beaumetz and Débove have obtained their best results have been phthisical, the splendid results obtained by Weir Mitchell and Playfair with systematic feeding, show that its application is not limited to that class. Many cases of hysteria, anæmia, chlorosis, and convalescence from acute diseases and organic affections are accompanied by loss of appetite and even disgust for food; due in great part to the fact that the stomach has become so unaccustomed to the presence of food that it has partially lost its digestive power, the best restorative of which is food in small quantities frequently repeated. As the normal bulk of food cannot be retained or digested, the quantity must be decreased, while the nutritive value must be correspondingly increased. For this purpose we have the various meat-powders, etc., many of which are valuable, though in some cases none can be relished, or even retained, on account of their insipidity and, to some, slightly nauseous taste.

Excellent results have been obtained from the use of dried beef-blood. Recently Guerder, of Paris, has made an extensive trial of the dried beef-blood, made, however, by a new and improved process. Its advantages over powdered meat are: it is much cheaper, is superior to it in alimentary properties, representing seven times its own weight of fresh blood, and it exercises a more pronounced stimulant action on digestion and on the general organism. Whether this stimulant action is due to the extractive matters of the dried blood, to its salts, or to the large proportion of iron contained in it, cannot be positively stated. It is highly probable, however, that the iron constitutes an important factor, as its proportion of 0.30 part per 100 is sufficiently large to represent medicinal doses of iron.

It is quite certain that the reputed indigestibility of blood is without foundation, as the blood-bread in common use in Sweden is highly nutritious and easily digested, as are the blood-puddings eaten in other countries.

Débove and Dujardin-Beaumetz have not had good results from the use of dried blood. Guerder attributes this want of success to the large quantities which they administered, and their faulty methods of preparing it. Indeed, their results with his preparation have been eminently satisfactory. Guerder had administered it in 51 cases. Of this number, 44 took it well, and without inconvenience, for several weeks. Three convalescents from typhoid fever were unable to retain it at all, while to the remaining 4, all chlorotics, it was disagreeable, producing unpleasant sensations in the stomach, and was sometimes vomited unchanged after several hours. While there is, of course, no fixed dose, we should be careful that the stomach is not imposed upon. A large spoonful may be given three or four times a day to children, with a little cold coffee, and two or more spoonfuls to adults. Pepsin may be added if it causes gastric disturbance. If the patient takes other food, the blood should be taken with it, preferably in a *cold* liquid, and, if necessary, disguised by some aromatic, as heat develops its peculiar taste and causes difficulty of absorption.

Although excellent results have been obtained from its use in chlorosis, convalescence from acute diseases, etc., its effects upon phthisical patients have been most remarkable. When the disease was not far advanced there was invariably an early increase of strength, weight, and

appetite. It is desirable that it be still further used, in order to determine, as nearly as possible, its exact value, and certainly, with Guerder's results, it is worth the trial.

Guerder's method of preparing the dried blood is as follows: Fresh beef-blood—sheep's blood is undesirable, having a very unpleasant odor—is defibrinated and cooked for five hours on a water-bath, then slowly dried in a current of warm air at a temperature of 104°–108° F. This demands at least three days, as every trace of moisture must be removed in order to prevent decomposition.

In this connection we may also speak of another article—highly nutritious, easily digested, and retained, and but little used—viz., raw eggs. The only objection to their use is the individual objection of the patients, and this only before the first is taken—for they seldom object afterward. The egg may be broken into a glass, care being taken that the yolk is not broken, a little salt and pepper added, if desired, and the patient takes it. He scarcely has the trouble of swallowing, for it goes down of itself. We have seen patients retain easily and even relish a raw egg, who could retain nothing else, more than six hundred being taken in one case within three or four months. It goes without saying that the egg should always be carefully selected; and, indeed, for fear that one which has seen its best days should disgust the patient, it were better to prepare it out of his sight.

EXPULSION OF THE RELIGIOUS ORDERS FROM THE PARIS HOSPITALS.

The Government of France has for some years been engaged in a crusade against the church, and has sought by every means in its power to suppress its ministers and to place difficulties in the way of the practice of religion by believers. As long as its efforts were confined to the expulsion of the religious orders and the secularization of the schools, the matter was one of but little concern to medical men, however much they might as individuals be amused or shocked at French ideas of liberty. But, being emboldened by the success of their measures in banishing religion from the schools, the members composing a majority of the Assembly have now turned their attention to the hospitals. They first passed a decree abolishing the office of chaplain in all the hospitals. This was done on the plea of economy, and it was asserted that the patients would by no means be deprived of spiritual consolation, as, if a request were made to that effect, the nearest parish priest would be summoned. But their subsequent action in driving out the sisters showed plainly enough that they were not actuated by motives of economy. Their design was to render as difficult as possible all access of the ministers of religion to the sick and dying in the hospitals. Every medical man, no matter what his particular belief or unbelief may be, knows from experience that the quiet of mind resulting from the consolations of religion often exert a most beneficial influence upon the sick, and it cannot but be regretted that the French authorities have seen fit to reject this adjuvant to medical skill and nursing. As stated above, a further decree has been promulgated, removing the sisters from the hospitals and supplying their places with salaried nurses. To those who know the value of good nursing and have occasion to see the efficiency of the sisters of different orders in the various hospitals under their care, this move of the French Assembly seems little short of brutal. Whatever may be thought of the danger of permitting priests to exercise their vocations in the French schools and hospitals, certainly the integrity of the Republic can hardly be imperilled by allowing inoffensive sisters to nurse the sick. Even the authors of this measure have themselves been forced to bear unwilling testimony to the worth of these devoted women. At a recent meeting of the Conseil de Surveillance de l'Assistance Publique, the question of the secularization of the Hôpital Necker came up in the order for the day. But it was decided to retain the sisters for the present, because of the possibility of an epidemic in the city. As soon as this danger is over they must go, and M. Quentin engaged to supply the places of a hundred religious by an equal number of lay nurses before the end of the year. The French ministers are a little too intemperate in their anti-clerical zeal, and both doctors and patients will have cause to deplore the unwisdom of the secularization of the hospitals.

THE ANTISEPTIC ACTION OF DRUGS WITHIN THE BODY.

The parasitic theory of disease is one that appeals most temptingly to the imagination of the therapeutist. Once the particular parasite is found upon whose presence in the organism the manifestations of any given disease depend, experiments will speedily determine what drugs are poisonous to it. Then, these two factors being given, what can be more easy than the solution of the problem of cure? It is only necessary to give the remedy in quantities sufficient to kill the parasite, and our patient is cured—provided, of course, that the microbe has not had time to produce irremediable organic lesions. When the disease is a local one and admits of the direct application of the antiseptic agent, this dream may be realized. Indeed, empiricism has often, in such cases, anticipated the deductions of science, and we find the explanation of the action of long-used remedies in the power they possess of destroying certain low forms of organic life. But in the treatment of systemic or internal diseases of parasitic origin a more complex problem presents itself. If the tuberculous patient carried his bacilli about in a bottle or a test-tube instead of in his lungs or other organs, their destruction would be a very simple matter. But when it comes to killing the micro-organisms which are scattered about in various inaccessible organs and tissues of the body, the dose of the required remedy must be so great that we run the risk of killing the patient as well as his parasites. Koch has determined by experiment that corrosive sublimate is fatal to the anthrax bacteria when added to the culture fluid in the proportion of 1 part to 200,000. If given in the same proportion to the mass of blood in a man weighing one hundred and thirty pounds, it would require at least two-fifths of a grain in a single dose. Binz endeavors to show that a proportionate dose may be given by intravenous injection to animals without fatal results. He therefore takes issue with those who have denied the possibility of destroying micro-organisms within the body, without, at the same time, endangering the life of the

patient. The value of Binz's experiments is, however, questioned by Buchner (*Centralblatt für Klinische Medicin*, July 14, 1883). The latter claims that corrosive sublimate in the proportion of 1 part to 200,000 of the animal fluids is fatal to the organism, and he refuses to accept the conclusions of Binz in disproof of his assertion. Corrosive sublimate, he says, enters into chemical combination with the albumen of the blood, forming an albuminate of mercury. This substance, although remaining in solution, is less readily diffusible and less capable of endosmosis, and hence there is no certainty that it becomes equally distributed in all the tissues. Further, the bichloride, by its transformation into albuminate of mercury, is robbed of a great part of its poisonous action. This is indicated by the less irritant action, and therefore the less immediately injurious effect upon the cells, of the latter salt when injected hypodermically. Buchner has found that double the quantity of albuminate of mercury is required to produce the same effects upon bacteria as are caused by a given amount of the bichloride. He does not deny that certain diseases are cured by the internal administration of antiseptic remedies, such as quinine, bichloride of mercury, salicylic acid, etc. But he asserts that they act, not as antiseptics, but in some other way, possibly by increasing the power of resistance of the organism to the action of the specific parasite. He says that were quinine to act as an antiseptic within the tissues, it would require in the average individual a dose of at least three ounces. Arsenic, again, possesses feeble antiseptic properties, yet its action in small doses in malaria is undoubted. It cannot be due to its poisonous action upon the malarial bacteria, and must, therefore, be owing to some specific effect whereby the tissues are enabled to resist and throw off the poison. The author concedes that there may be some relation between the property possessed by a drug of destroying micro-organisms outside of the body, and its known value as a remedy in disease, but he denies that the action in the two cases is the same. He thinks that newly discovered antiseptics should always be given tentatively in parasitic diseases, and believes that thereby many valuable specifics may be added to our list. But the attempt to secure an antiseptic action of any drug within the body is not only useless, but fraught with danger to the life of the patient.

THE RECORD'S CABLE REPORT OF THE BRITISH MEDICAL ASSOCIATION.

THE *British Medical Journal* contains the following appreciative notice of THE RECORD's cable report of the meeting of the British Medical Association. "The New York MEDICAL RECORD publishes in its number of August 4th an excellent summary of the proceedings of the recent meeting of the British Medical Association at Liverpool, forwarded by daily despatches through telegraphic cable. The outlay on this enterprising report must have been considerable, and we may refer to it with satisfaction, not only as an admirable example of journalistic enterprise, but as a striking evidence of the strong and growing feeling of sympathy and international interest which characterizes the relations of the profession in Great Britain and America. THE MEDICAL RECORD speaks in terms of the most courteous compliment and congratulation of the organization of the British Medical Association and its results, and refers with special satisfaction, and in eulogistic terms, which we recognize gratefully without reproducing, to the words in which the health of our guests was proposed at the annual dinner, and the warm friendship felt and shown toward our American guests."

KAIRINE—THE LATEST RIVAL OF QUININE.

THIS new antipyretic agent has as yet attracted but little notice in this country, although it has for some time been the subject of investigations by our German confrères. It was discovered about a year ago by Dr. Fisher, of Munich, who states that it is the hydrochloride of oxyethylquinolinehydrid. If there is anything in a name, there ought to be no doubt of the value of the remedy, but this is a busy world, and life is short, so the name has been mercifully changed to kairine. The testimony thus far collected, concerning the properties of kairine, is somewhat conflicting. Dr. Girat has experimented largely with it on animals, and has found its lowering effects upon temperature to be very constant. It also slows the pulse and diminishes the number of respirations. He administered the drug hypodermically, and states that the member into which the injection was passed became paralyzed. The sensibility of the part was blunted, passing sometimes to complete anæsthesia. Elimination occurs, in part at least, by the kidneys, and is tolerably rapid, the presence of the substance in the urine being determined within twenty-five minutes after its administration. The urine acquires a dark green color. According to Dr. Girat's experiments, the toxic dose is said to range between one and two grains to the pound of the weight of the animal. Dr. Filehne (*Berliner Klinische Wochenschrift*, April 21, 1883) concludes, from observations made by him in disease, that kairine is a most valuable febrifuge, effective in all conditions accompanied by elevated temperature. He has employed it with success in typhoid fever, acute articular rheumatism, septicæmia, phthisis, and pneumonia. He recommends its use tentatively in commencing doses of seven and a half grains per hour for four hours, or until the temperature has fallen to 100° F. The dose is then lowered to three or four grains, to be again increased when the temperature begins to rise. It is stated that by carefully experimenting during the first day, the proper dose may be ascertained for each individual, which may then be adhered to in the subsequent treatment. These favorable effects have not been recorded, however, by all observers. Professor Riegel reports most unsatisfactory results in the treatment of pneumonia by kairine (*Allgemeine Medicinische Central-Zeitung*, July 28, 1883). He was unable to obtain any notable reduction of temperature by four hourly doses of seven and a half grains each, and even larger amounts were often powerless to produce the desired effect. Even when he succeeded in reducing the temperature nearly to the normal, it often rose again in spite of repeated doses of the remedy. As regards the pulse, it was by no means reduced in frequency as the temperature fell, and, furthermore, it was much weakened. An improvement in the subjective sensations

of the patient, as described by Filehne, was not met with, but, on the contrary, there was repeatedly observed such a depression, amounting almost to collapse, that it was necessary to discontinue the kairine and resort to stimulants. The same effect has been noticed by Seifert. Professor Riegel concludes that kairine is a dangerous remedy, in pneumonia at least, chiefly because of its depressing action upon the heart, and he cautions against its use in asthenic forms of the disease. It is evident that further trials are necessary before the exact value of this new substitute for quinine can be determined, and it is doubtful whether it will be able to maintain the high character as a safe and certain antipyretic which the early experimenters claimed for it. In fact, few new remedies answer fully to the expectations of their introducers.

THE WISCONSIN STATE MEDICAL SOCIETY AND THE ISOLATION OF CONSUMPTIVES.

As will be seen in the opposite column, the Wisconsin State Medical Society, during its annual session last week, passed a resolution virtually declaring consumption to be an infectious disease, and urging the necessity of the proper isolation and disinfection of those suffering from it.

This action will be regarded, we believe, as somewhat premature. Phthisis is, to be sure, now considered by pathologists as a tubercular infection, and the possibility of its very occasional contagiousness is not to be denied. But the profession is by no means yet prepared to accept the view that the disease is actively or dangerously contagious. Medical societies, therefore, by intimating that it is so, do an act that is sensational, weak, and injurious to their prestige.

News of the Week.

THE AMERICAN PHARMACEUTICAL ASSOCIATION held its annual meeting at Washington, D. C., on September 10th, 11th, and 12th, the President, Charles A. Heinath, in the chair. Mr. Sloan, from the Committee on Drug Market, submitted a report containing statements and tables reviewing the fluctuations of the market for the year, and stating, among other things, changes made in the tariff on drugs. Mr. J. W. Colcord, of Massachusetts, offered a resolution directing the Committee on Legislation to ask Congress to appropriate $25,000 for the introduction of foreign medical plants into this country, and for the propagation and care of home plants. He said that the climate of the United States presents peculiar advantages for the growth of many foreign medical plants, and that Dr. Loring, Commissioner of Agriculture, favored the proposition. The Ebert prize was awarded to J. U. Lloyd, of Cincinnati. The following officers were elected for the ensuing year: President, W. S. Thompson, of Washington; First Vice-President, Dr. Charles Rice, of New York; Second Vice-President, T. H. Masi, of New York; Third Vice-President, E. W. Runyon, of San Francisco; Treasurer, Charles A. Tufts, of Dover, N. H.; Permanent Secretary, J. M. Maisch, of Philadelphia; Reporter of Progress of Pharmacy, C. L. Diehl, of Louisville, Ky.

THE ANNUAL MEETING OF THE WISCONSIN STATE MEDICAL SOCIETY.—This meeting was held at Milwaukee, September 5th, 6th, and 7th. Dr. Mason, of Milwaukee, First Vice-President, was in the chair. About sixty members were present. An unusually large number of papers was read. The officers elected for the ensuing year were: Dr. Dodson, of Berlin, President; Dr. E. W. Bartlett, First Vice-President; Dr. Jenkins, Second Vice-President. Dr. Reeves was continued in his office of Permanent Secretary and Treasurer.

The Society took official action in regard to the matter of color-blindness, urging that there be some legislation by the State regarding it.

The Society also passed the following resolution:

"*Resolved*, That in consideration of the advance as to a knowledge of the causes of consumption and of the now known infectious character of the disease, we use all the means in our power to have the phthisical members of families as much as possible separated from the healthy members, and also that we recommend the State Board of Health to take means to have such persons separated from intimate association with the well in our public institutions."

During the session, Dr. F. A. Marsden was suspended for having distributed patent medicine circulars.

The Society adjourned to meet on the first Tuesday in May, 1884.

THE WELL-KNOWN ANATOMIST, PACINI, recently died at Padua.

THE FLOATING HOSPITAL OF ST. JOHN'S GUILD has closed its work for this season. Forty-four excursions were made, on which 29,189 children and mothers were carried. The greater number of these were sent by dispensaries and the Board of Health.

THE TWELFTH ANNUAL SESSION OF THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, MEDICAL SECTION.—This Association held its annual meeting at Rouen, August 16th, 17th, and 18th. The Honorary President of the Medical Section was M. Verneuil; the President, M. Duplouy, of Rochefort. Among the more prominent persons present were Drs. Huchard, Landowsky, Voisin, and Jolly. A paper was read by M. Pineau "Upon a New Fact Regarding the Transportation of Typhoid Fever." M. Deshayes reported a unique case of "Herpes Zoster following the Right Fifth Nerve, and accompanied by Neuralgia." M. Huchard read an elaborate paper upon "Hæmoptysis Occurring in Rheumatics who are not Tuberculous." M. Gallard introduced a discussion upon the "Theory of Menstruation." M. Gallard read the history of a curious case, which he considered "Tetanus of Gastric Origin." The patient, who suffered from persistent dilatation of the stomach, was subject to convulsive attacks of the limbs, the face and trunk not being involved. These attacks ceased under treatment of the gastric condition. MM. Audrien and Raoul Bravais presented a communication upon "Antimicrobic Medication;" under the name of "anti-epidemic granules," they presented some pills composed of "monosulphure de magnésium anhydre." These they claimed, when taken in proper doses, would remove the susceptibility to infectious disease. M. Mallez showed the Society a "Surgical Pantograph," by which the size

and contour of a body could be measured. M. Landowsky read a paper upon the therapeutics of "Piscidia Erythema," but communicated nothing new. M. Voisin made a plea for the use of the hypodermic method of giving medicines in nervous and mental diseases. M. Tessier tried to show that "typhoid fever" varied in amount (at Lyons) in accordance with the rise and fall of the subterranean or well-water. M. Cerné reported a case of "Spontaneous Gangrene in a Patient with Polyuria and Phosphaturia." The subject of "Alternating Diabetes" was brought up and cases where there was, at different times, glycosuria, polyuria, azoturia, were cited. M. Jolly read a paper upon "The Primary Function of the Phosphates in Living Beings." M. Gouguenheim read a paper upon "The Indications for Tracheotomy in Tubercular Laryngitis," in which he took the ground that the operation was rarely needed, and only in certain cases where there is rapid caries or infiltration. M. Beauregard read a paper showing the favorable results of "Osteotomy in the Treatment of Genu Valgum in Infants." He had never had any consecutive accidents in doing this operation.

THE INTERNATIONAL MEDICAL CONGRESS.—We have received a letter from Dr. Lange, Secretary-General of the International Medical Congress, which meets at Copenhagen next August, in which we are informed that the General Organizing Committee, formed for the preparatory work, is composed of the following members, living either in or near Copenhagen: President, Professor P. L. Panum; Secretary-General, Professor C. Lange; Secretaries, Dr. O. Bloch, Dr. C. J. Salomonsen, and Surg.-Gen. Joh. Moller; Honorary Treasurer, Professor E. Hansen Grut; besides the presidents and special committees of the Sections, viz.: Anatomy, Professor Chievitz; Physiology, Professor P. L. Panum; General Pathology and Pathological Anatomy, Professor C. Reisz; Medicine, Professor F. Trier; Surgery, Professor Holmer; Hygiene and State Medicine, Dr. E. Hornemann; Military Surgery and Medicine, Director-General of the Medical Department of the Army Salomon; Mental and Nervous Diseases, Professor Steenberg; Obstetric Medicine and Surgery and Gynecology, Professors Stadfelt and Howitz; Diseases of Children, Professor Hirschsprung; Ophthalmology, Professor E. Hansen Grut; Diseases of the Skin and Syphilis, Professor Haslund; Diseases of the Ear, Dr. W. Meyer; Diseases of the Throat, Dr. W. Meyer. The special committees formed for the aforesaid Sections have, when they found it useful, completed their number by members living outside Copenhagen, partly in Denmark, partly in the other Scandinavian countries. The Organizing Committee is now at work preparing a programme.

DR. CALVIN ELLIS has resigned his position as Dean of the Harvard Medical School. Dr. H. P. Bowditch, it is said, will be elected in his place.

THE CANADA MEDICAL ASSOCIATION held its annual meeting at Kingston, Ont., September 5th, 6th, and 7th.

THE ENGLISH CHOLERA MISSION TO EGYPT.—Letters received from the medical men sent out from England to Egypt are, says the *British Medical Journal*, very discouraging. It does not seem likely that sanitary measures for the prevention of future outbreaks of cholera can be adopted for a long time to come. It is claimed that cholera has been in Egypt since 1865, and that cases occurred near Damietta last May. Antecedent to cholera, there had been an epidemic disease among horses, typhus carbunculosis, so called, and next bovine typhus, which killed its thousands. The difficulties of carrying out efficient sanitation are found to be enormous. The habits of men, women, and children are such as habitually to defile their habitations and the surrounding ground. As to the Medical Department, it has been found to be in a far worse state than could have been expected. The registers of deaths in the villages are made out by the barber; the cases, in a large proportion, are never seen during life, and the barber enters whatever disease comes first to his imagination and his pen. The Egyptian medical officers are, as a body, found to be wretchedly paid, and very incompetent; cowardice and neglect of duty are very rife among them. They have not the confidence of the fellaheen, who seldom seek their advice, and the Arabs never, without exception. The hospitals are wretched, tumble-down hovels, filthy in the extreme, and the beds not less so. The lunatic asylum at Abbassieh is filthy beyond description, and its management indescribably bad.

ASSOCIATION FOR DISEASES OF THE RESPIRATORY ORGANS AND CLIMATOLOGY.—A meeting for the purpose of organizing the national "Association for Diseases of the Respiratory Organs and Climatology," will be held in the parlors of the Academy of Medicine in this city (12 West Thirty-first Street), on Tuesday, September 25th, at 10 A.M.

COLLEGE OF MIDWIFERY, N. Y.—The following changes have been made in the Faculty: Dr. Sarah E. Post has been appointed Professor of Physiology in the place of Dr. John Alsdorf, who has taken the chair of Diseases of Pregnancy and Parturition. Dr. Henry F. Hessler has been appointed Professor of Clinical Midwifery and German Instructor in Obstetrics. The sessions have been extended to six months—three months of didactic instruction, and three months of clinical work.

NEW BRUNSWICK MEDICAL SOCIETY.—This Society held its third annual meeting at St. John recently, when about fifty members were present. The following officers were elected: *President*, Dr. Vail; *First Vice-President*, Dr. Walker; *Second Vice-President*, Dr. Patterson; *Secretary*, Dr. G. M. Duncan; *Corresponding Secretary*, Dr. Coleman; *Treasurer*, Dr. Nevers. Dr. Steves, of St. John, proposed that a New Brunswick quarterly medical journal be established under the auspices of the Society. The next meeting will be held in St. John, in July, 1884.

THE ATLANTIC JOURNAL OF MEDICINE is a new monthly journal recently started in Richmond, Va., and edited by Drs. Robert B. Stover and Henry G. Houston.

THE CHOLERA EPIDEMIC IN EGYPT seems to be at an end. During its whole course—that is, in about three months—it has destroyed nearly thirty thousand lives.

PROFESSOR SCHWALBE, of Königsberg, has been called to Strasburg.

Reviews and Notices.

TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE. Fiftieth Annual Session, held at Nashville, Tenn., April 10 and 11, 1883.

THIS year's report has appeared with commendable promptitude, wherein it contrasts favorably with that of last year and with society reports in general. The volume contains several papers of interest and of refreshing brevity, and also the code of ethics of the American Medical Association. The society contains three hundred and thirty-eight members, and has lost three members by death during the year.

REPORT OF PROCEEDINGS OF THE ILLINOIS STATE BOARD OF HEALTH. Quarterly Meeting, held at Springfield, Ill., June 29, 1883.

THE Illinois State Board of Health is doing a good work in seeking to rid the State of quacks. Its efforts hitherto have been productive of good results, and judging from the secretary's report, presented at this meeting, it intends to keep up the fight until all the travelling and advertising charlatans have sought refuge in other less-favored localities. Further than this, the board endeavors, by the only means in its power, expostulation with the offenders, to discountenance the practice of giving medical testimonials concerning the virtues of various nostrums and patented surgical appliances. May the good work go on.

TRANSFUSION: ITS HISTORY, INDICATIONS, AND MODES OF APPLICATION. By CHARLES EGERTON JENNINGS, L.R.C.P. London: Baillière, Tindall & Cox, 20 King William Street, Strand. 1883.

IN this little volume of sixty-nine pages the author has called attention to certain cases where transfusion would, as a rule, afford only temporary benefit, as well as to those in which this measure is demanded on the part of the practitioner, and is generally attended with success. His remarks are also supported by clinical experience and by statistics. In addition, the methods of application (illustrated), and the favorable conditions necessary to the operation are also presented, together with the immediate causes of failure, the several attending dangers, and the means of avoiding them.

TRANSACTIONS OF THE MICHIGAN STATE MEDICAL SOCIETY for the Year 1883. No. 3, Vol. VIII. Lansing: W. S. GEORGE & Co. 1883.

THE eighteenth Annual Meeting of the Michigan Medical Society was held at Kalamazoo, Mich., May 9 and 10, 1883. The usual business of annual meetings was transacted, the usual papers read, and the usual animated discussion over points of order held. The volume before us contains, in addition to the scientific papers, an amusing squib in verse by Dr. E. B. Ward, the title of which is "Pro Bono Professionis."

BACTERIA AND THE GERM-THEORY OF DISEASE. By DR. H. GRADLE, Professor of Physiology, Chicago Medical College. 8vo, pp. 219. Chicago: W. T. Keener, 96 Washington Street. 1883.

THIS volume comprises a series of eight lectures on the above subject, delivered at the Chicago Medical College by the author. The subject is, moreover, very fairly handled in each essential point. Beginning with the relation of the germ-theory of disease to the animal system, the examination and the cultivation of bacteria, fermentations, putrefaction, are then dealt with, followed by the action of bacteria in digestion, inoculation of germs, the germicide treatment, etc. Surgical infection is then taken up in its various forms. The chapter on tuberculosis, its infectious character and its inoculability, is not among the least interesting. The fevers, diphtheria, syphilis, and various local diseases, also receive attention. Finally, the importance of the germ-theory of diseases in its relation to the future is considered.

The work is altogether one of undoubted interest, not only from the great importance of its subject, but chiefly from the large amount of original work done, and the completeness with which it is presented, even in minute detail; the latter being especially prominent, when it is remembered that most of our published information on this topic is, as a rule, in the form of abstracts from foreign journals.

EXCISION OF THE KNEE-JOINT, WITH REPORT OF TWENTY-EIGHT CASES. Illustrated by Thirteen Photo-lithographs and Wood Engravings. By GEORGE EDGEWORTH FENWICK, M.D., C.M., Professor of Surgery McGill University; Surgeon to the Montreal General Hospital. 8vo, pp. 68. Montreal: Dawson Brothers. 1883.

DR. FENWICK regards the operation of excision of the knee-joint as undeserving of the disfavor into which it has fallen, and he endeavors in this little volume to gain for it somewhat more consideration at the hands of his professional brethren than it now receives. His cases are comparatively few—twenty-eight in eighteen years—but the results are exceptionally good. Indeed, had other surgeons met with such uniform success, the operation would never have needed an apologist. The author's method of operation consists briefly in sawing off only so much of the joint surfaces as is absolutely necessary, preserving the epiphyses as far as possible. The articular end of the femur is rounded and made to fit into the hollowed-out head of the tibia. The surgeon's personal attendance to the after-treatment is insisted upon. It is to this method of section of the bones that the author attributes much of his success, and he hopes to see its general adoption in order that others may share in his good fortune, and unite with him in upholding the reputation of this operation.

THE PRINCIPLES AND PRACTICE OF MEDICAL JURISPRUDENCE. By the late ALFRED SWAINE TAYLOR, M.D., F.R.S., Fellow of the Royal College of Physicians of London. Third edition. Edited by THOMAS STEVENSON, M.D. (London), Fellow of the Royal College of Physicians of London, etc. 2 vols., 8vo, pp. 1,359. Philadelphia: Henry C. Lea's Son & Co. 1883.

No one need doubt at the present day that Taylor's work is the leading one on medical jurisprudence in the English language. It was quite fortunate for both medical and legal professions that the author in his last edition brought his treatise so thoroughly up to the times and so carefully and judiciously interpolated all the leading cases and decisions pertaining thereto. It was in that respect more than an improvement on the previous edition, as it was essentially revised from beginning to end, while much valuable matter was added under the head of poisons, wounds of throat, blood-stains, cicatrices, asphyxia, abortion, infanticide, insanity, and life insurance. Thus the work was left by its author at the time of his death. The task of subsequent revision has been undertaken by the former colleague of Dr. Taylor, Dr. Stevenson, who has shown himself in every way fitted for the task. He has evidently gone over the text with great care for the purpose of adding new facts of evidence under their respective headings, while steadily keeping in view the necessity of not increasing the number of pages. This has compelled him in many instances to curtail some of the chapters, notably those on medical evidence.

The chapters on poisoning have been in many parts entirely rewritten, the necessity for which can be readily understood by the recent advances made in this department of forensic medicine. New and illustrative cases have been added in many other departments. The editor has very wisely used his privileges of adding facts without in any way interfering with the author's views regarding the main principles upon which all proper medi-

cal evidence is founded. The volumes are published in good style.

ANATOMY, DESCRIPTIVE AND SURGICAL. By HENRY GRAY, F.R.S., Fellow of the Royal College of Surgeons, etc., with Introduction on General Anatomy and Development by T. A. Holmes, M.A. Cantab. With drawings by H. V. Carter. Edited by T. Pickering Pick, Surgeon to St. George's Hospital. New American from the Tenth English Edition. To which is added Landmarks, Medical and Surgical, by Luther Holden, F.R.C.S., with additions by W. W. Keen, M.D. 8vo, pp. 1,023. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS well-known work comes to us again as the latest American edition from the tenth English edition. As its title indicates it has passed through many hands, has received many additions and revisions. Consequently the publishers are content to issue it more as a reprint than as an improved edition. There is good reason for the latter course, as the work is not apparently susceptible of more improvement. Taking it all in all, its size, manner of make up, its character of illustrations, its general accuracy of description, its practical aim, and its perspicuity of style, it is the anatomy best adapted to the wants of the student and practitioner.

Reports of Societies.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(Continued from p. 271.)

AFTER the transaction of society business at the session of Thursday, September 6th, DR. J. J. CHISOLM, of Baltimore, Md., read a paper on

THE REMOVAL OF FOREIGN BODIES IN THE EAR.

He stated that the little bony projections on the exterior surface of the drumhead have often been mistaken for foreign bodies, and the attempt to extract them on the part of the general practitioner has produced disease and permanent deafness. To illustrate the common occurrence of attempts to remove these ossicles for extraneous bodies he cited several cases which had come under his notice. He believes that there are numerous cases of individuals living many years with foreign bodies in the ear without knowledge of the fact, and stated that most instances of inflammation of the ear were due more to injudicious attempts at removal than to the presence of the body itself. He had never seen, in all his experience as a specialist, a case of foreign body in the ear, not interfered with by another person, which he was unable to remove by the careful use of a syringe and warm water. In all instances of leguminous or other foreign bodies that increase in size by the absorption of water in the ear, he recommends

THE FILLING OF THE CAVITY WITH ALCOHOL TO PRODUCE SHRINKAGE BEFORE THE USING OF THE SYRINGE.

He uses pure alcohol.

DR. SPIERS GIBSON, of Staunton, exhibited

AN EXTENSION AND SUSPENSION SPLINT

of his own invention for treatment of fractures of long bones.

DR. L. MCLANE TIFFANY, of Baltimore, Md., read a paper on

PLASTIC SURGERY OF THE FACE,

and after careful description of the anatomy of the face he instanced the different plastic operations of that portion of the body. He referred to the peculiarity of the fact that the facial bones will often not become necrosed when denuded of their covering, differing from the bones of the trunk and extremities. He stated that he always adopted the old-fashioned method of marking off the flap before cutting in plastic operations, preferring tincture of iodine for that purpose.

He employs hot water as a hæmostatic almost invariably in surgery of the face, and uses iodoform and absorbent cotton on all granulating wounds of that part. He employs only the simple interrupted suture by means of silver wire. He laid great stress upon the necessity of bringing together the lips of all wounds of the face, simply in apposition without the slightest tension; and stated that he always makes a flap for the hare-lip operation, contrary to common usage. He gave full details of his mode of operating in the mouth. Dr. Tiffany exhibited several large plates and photographs of cases illustrative of his paper.

DR. JOHN N. MACKENZIE, of Baltimore, Md., read a paper on

DEFLECTION OF THE NASAL SEPTUM

and its treatment. He believed that a tendency to this condition was frequently inherited. The condition narrows the nasal orifice and increases the pharyngeal opening, and the irritation by reflex action on the vasomotor nerves often causes aural disease. Ozæna is frequently produced from the condition by the air remaining in the nasal cavity imperfectly changed and putrescence invited. He described the present form of modification of replacement of deflected bony septum, which has for the past few years been known as Steel's modification of Adams' operation, and showed that Dr. Bolton, of Richmond, Va., some years before Steel's paper on the subject, described the identical method in his own practice in an issue of the *Richmond Medical Journal*. Dr. Mackenzie was emphatic in his advice to the members to look closely after the sequelæ which follow the condition named, and stated that it was his invariable rule to begin an examination of the throat and ear with a careful exploration of the nasal passage and retro-nasal space.

DR. J. A. WHITE, of Richmond, showed a selection of instruments and dilators for operating on deflected nasal septum and made a few remarks upon the operation, giving his reasons for his

EMPLOYMENT OF SEATANGLE BOUGIES FOR HOLDING THE SEPTUM IN PLACE

after replacing. He related the details of cases in which he had lately used Seiler's galvano-cautery for ulcer of cornea in pannus and granular lids as well as deflected septum. Dr. Wright also showed a small mass of what appeared to be iron-ore, taken from the nose of a lady over forty years of age, the history of the case showing that the foreign body was introduced in early childhood.

RUSSIAN BABIES.—A correspondent of the New York *World*, speaking of Russian babies, describes as follows what one sees in the house of a Russian peasant: He looks curiously at one odd little bundle laid upon a shelf, another hung upon the wall on a peg, a third slung over one of the main beams of the roof, and rocked by the mother, who had the cord looped over her foot. "Why, that is a child!" cries the traveller, with a feeling similar to that experienced on treading upon a toad which was supposed to be a stone. "Why, what else should it be?" answers the mother. Having learned so much in so short a time, the inquisitive traveller wishes to inform himself about the habits of the creature in the bundle; but his curiosity being somewhat dampened by the extreme dirt of the little figure, he inquires of the parent when it was washed. "Washed?" shrieks the horrified mother, "washed! what, wash a child? You'd kill it."

Correspondence.

THE GERM-THEORY IN ITS RELATIONS TO MALARIA.

To the Editor of The Medical Record.

Sir: Almost simultaneously with my recent article in The Medical Record (August 18, 1883) upon the unreliability of any theory yet advanced as to the ultimate cause of malaria, I find two papers pertinent to the same subject in the *Popular Science Monthly* for September. One of these deals with the germ-theory of disease, being a lecture delivered before the Chicago Philosophical Society by Professor H. Gradle, M.D. The other, by Professor A. F. A. King, M.D., entitled, "Insects and Disease—Mosquitoes and Malaria," being the abstract of a paper on "The Prevention of Malarial Disease," read before the Philosophical Society of Washington.

Permit me to briefly review some portions of these two articles.

Speaking of the "destroyers" which cause disease, Professor Gradle remarks: "They are no longer invisible creatures of our own imagination, but with that omnipotent instrument, the microscope, we can see and identify them as living beings, of dimensions on the present verge of visibility. The study of these minute foes constitutes the germ-theory."

From this quotation I presume the doctor employs the term "destroyers" as equivalent to "germs." He acknowledges, however, that they are only of dimensions "*on the present verge of visibility*" by the microscope. I agree with him there, if he means that they have not yet been actually seen with any degree of certainty. Still he proceeds to say that the germ-theory "has substituted a tangible reality for idle speculation and superstition, so current formerly in the branch of medical science treating of the causes of disease." He says truly that "obscure chemical changes, of which no one knew anything definitely, or 'impurities of the blood,' a term of similar accuracy and convenience, were accused, while with regard to contagious diseases medical ignorance concealed itself by the invocation of a 'genus epidemicus.' The germ-theory, as far as it is applicable, does away with all these obscurities."

I cannot at all subscribe to the last dogmatic assertion. I am quite sure that there are many zymotic affections (that class to which the germ-theory is peculiarly applicable) in whose study "medical ignorance" has no other alternative than simply to recognize and acknowledge "impurities of the blood," whose character has not yet been demonstrated; or to invoke a "genus epidemicus" as the only explanation, however unsatisfactory, yet afforded, for a sudden outbreak and wide extension of some particular disease. As an example I may cite diphtheria.

Professor Gradle asserts that bacteria belong to the *lowest* order of fungi. He remarks that "no error has retarded more the progress of the germ-theory than the false belief that the bacteria of putrefaction are identical with the germs of disease." What, therefore, may it be asked, are identical with the germs of disease? and must not germs be regarded as fungi?—or if not, what are they?

Dr. Gradle goes on to say that "in order to prove the bacterial origin of a disease two requirements are necessary: First, we must detect the characteristic bacteria in every case of that disease; secondly, we must reproduce a disease in other individuals by means of the isolated bacteria of that disease. Both these demonstrations may be very difficult. Some species of bacteria are so small and so transparent that they cannot be easily, if at all, seen in the midst of animal tissues. This difficulty may be lessened by the use of staining agents, which color the bacteria differently from the animal cells. But it often requires long and tedious trials to find the right dye. The obstacles in the way of the second part of the proposition mentioned are no less appalling. Having found a suspected parasite in the blood or flesh of a patient, we cannot accuse the parasite with certainty of being the cause of the disease, unless we can separate it entirely from the fluids and cells of the diseased body without depriving it of its virulence. In some cases it is not easy, if possible, to cultivate the parasite outside of the body; in other instances it can be readily accomplished. Of course, all such attempts require scrupulous care to prevent contamination from other germs that might accidentally be introduced into the same soil."

By employing the expression "other germs" in the foregoing paragraph he can imply nothing else than that bacteria are germs, although previously he has expressly insisted that they are not.

Then bacteria-rods "form seeds or spores, as they are termed." Considering the minuteness of bacteria, and the consequent infinitesimal size of their spores, "which germinate again in proper soil," we are led to inquire once more, How about the germs? Almost every microscopist is familiar with the several forms of bacteria, as far as known. They exist universally, in the atmosphere high or low, in waters shallow or deep, in vegetables and in animals. They present no special peculiarities *to designate disease*. Those found in the tongue-scrapings of healthy persons cannot be distinguished from others existing in the blood and tissues of the victims to zymotic disorders.

Professor Gradle says: "When we experiment with an isolated disease-producing germ, it causes always one and the same affection, if it takes hold at all." Has the doctor ever succeeded in obtaining any such remarkable results with isolated germs? If so, the problem is solved.

As regards Pasteur's observations, Professor Gradle is not so sanguine as some others. He remarks that "Pasteur's own account" of the results of some of his experiments are "dazzling. But a repetition of his experiments in other countries, by his own assistants, has been less conclusive. In Hungary the immunity obtained by vaccination" (*i.e.*, against anthrax) "was not absolute, while the protective vaccination itself destroyed some fourteen per cent. of the herds."

"Yet, though much of the enthusiasm generated by Pasteur's researches may proceed further than the facts warrant, he has at least opened a new path which promises to lead to results of the highest importance to mankind." Let us trust that such may be the case. Thus far, however, it does not seem that Pasteur has demonstrated anything more *as to what are germs*, than did Jenner, the practical results of whose investigations required no theory to substantiate them.

In the second article referred to, Dr. King attempts to prove that mosquitoes are the chosen carriers of the malarial germs, and insert them into the human system. He remarks: "Viewed in the light of our modern 'germ theory' of disease, the punctures of proboscidian insects, like those of Pasteur's needles, deserve consideration as probable means by which bacteria and other germs may be inoculated into human bodies so as to infect the blood and give rise to specific fevers." Here, in the same way as Dr. Gradle, he speaks of "bacteria and *other germs*."

He goes on to say: "With our present knowledge of the 'germ theory' one would hardly dare, even once, to plunge an inoculating needle into the blood of a yellow-fever or typhus-fever patient, whether living and comatose, or recently dead, and then withdraw it and plunge it into his own blood or the blood of other persons; yet this is exactly what the mosquito is doing in nearly every yellow-fever epidemic, and what, perhaps, the flea is doing in the filthy jails and ships infested with typhus."

Now the profession are almost unanimous in rejecting the idea of personal contagion in yellow fever—so, if any germs are responsible for that disease, the mosquito

must extract them from some other source than the infected human body. It may possibly be otherwise with regard to typhus fever, which is well known to be intensely contagious. So with some other communicable diseases. Malignant pustules are occasioned by stings of flies which must have acted as vehicles for the contaminating element. A case was recorded in 1793 by Penada, an Italian physician, where a human being was seized with hydrophobia communicated by the bite of an insect. Bollinger remarks ("Ziemssen's Cyclopædia") that certain parasites, as fleas and lice, which are nourished by the dog, may transfer rabific poison to human beings and other animals by means of their blood-drawing apparatus. We can scarcely doubt that flies convey smallpox; and an apparently authentic instance of vaccination by the medium of a flea was reported in the London *Lancet*, June 22, 1872.

No one pretends that intermittent fever is contagious, although of the pernicious variety. Even the enthusiastic Tommasi Crudeli has never, so far as I am aware, entertained any such notion. But if his theory be allowed, that malaria may be transmitted from one individual to another by the injection into the latter from the former of what he terms the malarial ferment (only, however, that taken from *pernicious* cases), then it might readily be supposed that malaria could be carried from its terrestrial haunts to human beings, or from an infected person to a well one. Still, I am inclined to believe that this musical and rapacious insect, even if he invades our bed-chambers laden with the malarial ferment of Jersey (which by the way should need no coloring under the microscope), must be acquitted of any other crimes of poisoning than that of which we all have known him to be guilty. However, no one can deny that he is a pestiferous scamp.

Very respectfully yours,

CHARLES P. RUSSEL, M.D.

4 WEST 128TH STREET, NEW YORK CITY, August 25, 1883.

PRACTICE IN NORTH MEXICO.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It may not be uninteresting to my confrères to read something about medical affairs in this country, and about my professional experience during four and a half years of arduous work in the city of Monterey. The profession in this city is well represented by a number of physicians, graduates of the different medical schools of Mexico. They are generally well educated; possess a good classical education, before being admitted to the study of the profession, and a very fair theoretical knowledge. The text-books used at the medical schools are almost exclusively French works, translated into Spanish. Their practical experience they have to acquire, to a great extent, by years of practice and observation, the hospitals in the former Spanish-American colonies being far inferior to those of Europe or the larger cities of the United States, and, in consequence of this, the clinical instruction is rather limited. The Government cannot afford such large appropriations of money as are necessary to keep them in first-rate order, and it is well known that heavy expenditures are required for the proper maintenance of these important establishments, which are the pride of other civilized countries. Moreover, the old Spanish, or rather Moorish style of architecture is not adapted for hospitals, and affords but little comfort to the patients within their walls. The low floors, consequent dampness, imperfect ventilation, equally imperfect protection against the inclemency of the weather and absence of all provision for warming the rooms are certainly serious objections. Only the poorest classes therefore voluntarily resort to them. But the professional men of this country, as a rule, are highly intelligent and imbued with the earnest will and desire to continue their studies, even after they have received their degree of Doctor. They study and work assiduously, and, in this way, attain a standard of ability, which deserves high praise. Their gentlemanly deportment makes it an easy task to keep on friendly terms with them and to obtain even their friendly support and co-operation. I speak of Monterey only, as I have no experience concerning these matters in other parts of Mexico. The population of the north of Mexico is a mixture of Indian and Caucasian blood. Dr. Gonzales, of this city, a gentleman distinguished for his high scientific attainments, has told me that in the State of Nuevo Leon no man of pure Indian blood could be found. Within three centuries the amalgamation of the races has become complete. But the offspring of the two races represent in appearance mostly the Indian type. The excessive use of alcoholic liquors is but rarely observed. Their dress is plain, but not without taste. Their way of clothing themselves in winter is altogether insufficient. They simply wrap a blanket around themselves, but do not put on thicker underwear, and thus expose themselves to many diseases. I speak of those of the humbler walks of life, because the wealthier classes live almost in the same way as we of the more northern latitudes. It is true the winters are generally mild, yet they are sometimes sufficiently cold to require careful protection. The cities and smaller towns of Mexico are built in the old Spanish style, the houses are imperfectly ventilated, and those of the poorer classes often not ventilated at all; the floor is not or is hardly elevated above the streets and is made either of a kind of cement or of the soil stamped and beaten down, so as to make it more even and solid. When this country was settled by the Spaniards, the towns were laid out with the view of having a running stream of potable water close by, so that, in case of an attack or siege by hostile Indians, the inhabitants had that most necessary element within easy reach. In consequence of this, the site of towns and villages is frequently found in valleys, which do not present the conditions for salubrity, which are sought for in our time.

The Spanish colonists soon found out that in this country it was necessary to irrigate lands in order to insure a crop at all times, and thus, up to this date, agriculture is principally carried on on irrigable lands. It is hardly necessary to mention the well-known fact that irrigating ditches are the most fecund sources of malaria. The water runs in them for a few days; then it is directed into others, leaving the bed of these artificial rivulets exposed to the ardent rays of a Southern sun. Add to this the imperfect drainage of many yards and corrals; the fact that many houses are without privies, and the difficulty of getting rid of the offal and refuse inevitably produced by a large accumulation of human beings, and it becomes evident that the atmosphere is not always the purest, nor the conditions for salubrity the best. The climate of the north of Mexico, for the rest, is most agreeable. We do not have to endure the excessive heat in summer which prevails in Northern cities, nor the severe colds in winter. I might recapitulate in saying that the conditions for health would be very good had not man done some things to produce the contrary effect, and had left undone others of not less importance. As it is, diseases are not infrequent and the mortality is not by any means trifling. The official statement gives the latter 966 out of a population of 39,406 during the year 1880. Statistics of a later date I have not at hand. The most frequent diseases are those produced by malaria, the manifestations of which are manifold, from the simple intermittent to the formidable, pernicious, and all the different shades of remittents, for which so many names have been invented, but which I shall embrace in that class, as I wish to avoid confusion, and as my experience has taught me that the same disease may present itself, as to the outward symptoms, in a different way in different patients, and that complications occur in one case that fail to make their appearance in others. Even in different years these diseases differ in their symptoms and malignity, while the character of the remittent still cannot be denied if the proper

use of the thermometer is resorted to. The intermittents prevail nearly the whole year round; even in winter they do not cease, for the reason, probably, that if there are a few days with a temperature which hardly ever descends to the freezing-point, they are succeeded by warm days, during which we are made aware of the fact that we live in almost a tropical country. They are but rarely malignant, but most stubborn, and I have found myself repeatedly obliged to insist upon a change of residence for some time, in order to overcome their tendency to return. Masked intermittents are very frequent, such as neuralgia of one nerve or a group of nerves. I have had even some cases in which epileptiform convulsions took place, which had been treated already as cases of real epilepsy. A careful examination of these cases convinced me that they were manifestations of malaria; percussion showed considerable increase in size of the spleen, and the convulsions lasted much longer than they do in epilepsy; besides, the attacks did not come on suddenly and almost without premonitory symptoms, but after a preliminary stage, with considerable gaping and stretching, pains in the limbs, etc. The use of quinine revealed the real character of the disorder, and stopped the attacks which previously had resisted the use of bromide of potassium, etc. In Texas I had the opportunity of treating a similar case before, and therefore I had no unknown enemy to combat.

It would be tedious to enumerate all the different disguises under which one meets intermittents in a Southern country. The large majority of cases yield readily to a judicious treatment; but there are always some which leave a state of marasmus behind. Undoubtedly, in many it is consequent upon imperfect alimentation, since the poor are really poor in this country; but in other cases the disease itself produces a long, protracted state of anæmia, consequent upon the extensive destruction and insufficient reproduction of the red-blood corpuscles. I have had the opportunity to examine the blood of such patients and found the white corpuscles considerably increased in number, although not by any means approaching the proportion existing in leucæmia. Twice I have had an opportunity to observe mental derangement in consequence of protracted intermittents. They both succumbed after months of suffering. I have seen so much of intermittents in Louisiana and Texas that it appeared to me strange that only here, in Monterey, I should meet with cases of this kind. The fact was known to me that mental diseases may follow in the wake of protracted intermittents from the time that I read Griesinger's classical work in 1869, but I found only here the opportunity of observing it personally. As stated above, my efforts to overcome the disease were totally in vain. The experience of Collin, according to his work on fevers, seems to have been similar to mine.

EDMUND GOLDMANN, M.D.

MONTERREY, MEXICO, August 18, 1883.

HOW AN IMPACTED PEACH-STONE WAS DISLODGED FROM THE ŒSOPHAGUS.—Dr. J. S. Prettyman, of Milford, Del., writes: "Was consulted August 8th, as to what should be done in the case of an old man who had swallowed (or rather half swallowed) a peach-stone, which had lodged about the middle of the œsophagus. He could swallow nothing, and the tube seemed to be completely occluded. I advised rectal injections of lobelia inflata. The consultant, Dr. J. O. Pierce, of this town, administered ounce doses of the fluid extract every fifteen minutes until three ounces were thus used. The patient then was so urgent to go to the water-closet, that he was permitted, when, under active emeto-catharsis, the stone came up and he cried out in great joy, 'Doctor, I have got it.' The stone was a very large one and was so tightly packed in the tube that it would have been impossible to force it down without serious injury. No other apparent effect followed the use of the medicine."

New Instruments.

AN IMPROVEMENT IN CLINICAL THERMOMETERS.

BY W. R. LEONARD, M.D.,

NEW YORK.

THE accompanying cut shows a registering indestructible magnified index clinical thermometer. It is similar in construction to one described by me in THE MEDICAL RECORD of August 24, 1878: "The contraction of the bore of this thermometer is so extremely minute as to obviate the necessity for any air-speck whatever, and then no possible destruction of the index can take place, as an index is formed at every observation by this peculiar construction itself cutting off the entire column above it from the bulb portion below it. Thus we may, if we choose (no necessity exists for so doing), shake the entire column (index included) into the bulb and every time we warm the bulb a new index is formed for us by the contraction itself." The improvement that I desire to draw attention to in this thermometer is the etching of the observatory corrections in combination with the scale upon the stem. When thermometers are examined by comparison with a standard instrument it is almost invariably the case that some slight errors are found to exist in the scale, and these errors are set down on a certificate which is supplied with the thermometer, and which is numbered and marked in accordance with the numbers and marks on the thermometer, to insure identity therewith. Now, when the thermometer is used and an exact reading is desired, a certificate or a copy thereof has to be consulted and the errors added to or subtracted from the observed scale reading. This is a troublesome operation, as it involves reference to the certificate of correction, which possibly may not at the time be within reach or may be lost. To obviate this difficulty Mr. James J. Hicks of London, England, has patented the device of etching or otherwise marking the errors on the thermometer-tube itself, as shown by the accompanying cut at *a*, *a*, *a*, *a*. The corrections as shown in the drawing are 94.0, 100.4, 105.0, 110.0. In this case this thermometer may be called absolutely correct as it only varies $+\frac{1}{10}°$ at 110 and this verification is from the Kew Observatory. In this instrument the correction is in the shape of an addition, but in some cases they will be in the form of subtractions, when the sign minus is employed. The number and monogram or other sign of any examination office at which the thermometer has been compared with the standard instrument may be applied to the thermometer. By these means the thermometer carries with it the corrections found to be necessary, thereby greatly enhancing its utility, as the correct reading can be at once obtained by reference to the thermometer alone. These thermometers are manufactured by Shepard & Dudley, New York.

THE INCURABILITY OF CONGENITAL COLOR-BLINDNESS.—Referring to an editorial on the subject of color-blindness in THE RECORD of August 11th, Dr. B. Joy Jeffries writes, calling attention to the fact that it is almost universally conceded by ophthalmologists and experts that congenital color-blindness is incurable. He refers to the contrary view held by Favre of Lyons, France. Dr. Jeffries agrees in urging the value of educating the color-sense among the children of public schools.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 1 to September 8, 1883.

SHUFELDT, ROBERT W., Captain and Assistant-Surgeon. Granted leave of absence for three months on surgeon's certificate of disability, with permission to leave the Department of the South. S. O. 204, par. 3, A. G. O., September 5, 1883.

WAKEMAN, W. J., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Sidney, Nebraska. S. O. 92, par. 2, Department of the Platte, August 28, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending September 8, 1883.

DIEHL, OLIVER, Passed Assistant Surgeon. Detached from the Naval Academy and ordered to the U. S. S. Quinnebaug, European Station, per steamer of 15th ult.

ANDERSON, FRANK, Passed Assistant Surgeon. Detached from the U. S. S. Quinnebaug, on reporting of his relief, and granted leave of absence for three months.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 11, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 4, 1883.....	0	67	32	8	19	27	0	0
September 11, 1883.....	0	83	36	3	60	21	0	0
Deaths.								
September 4, 1883.....	1	24	2	8	1	21	0	0
September 11, 1883.....	0	27	7	2	6	15	0	0

THE LITERARY STATUS OF THE BOHEMIAN NATION.—Dr. N. Weidenthal, of Cleveland, O., writes: "In a recent issue you quote from a letter written by Dr. Councilman, of Baltimore, in which he makes a rather sweeping statement regarding the scientific and literary status of the Bohemian nation. If the doctor were a trifle better informed on this subject he would certainly modify the statement referred to. He is evidently not aware that Rokitansky and Skoda, whose names will always occupy an important place in the history of medicine, were Bohemians; that Oppolzer, one of the greatest teachers and clinicians of his day, was a native of the same country. Professor Arlt, the distinguished eye specialist, of Vienna, Professor Albert, who was recently called to the chair of surgery at the same university, and Professor Czerny, of Heidelberg, are all Bohemians. Professor Bamberger, of Vienna, is a native of Prague, but perhaps should not be included in this list, as I believe he is not a Czech, but a German Bohemian. Professor Seegen, one of the leading authorities of the present day on balneology, is also a native of that city. I will not touch upon the non-medical side of the question, as that is of less interest to our profession. In medicine alone I might have given a longer array of names, but have deemed it sufficient to give a few which have acquired a world-wide celebrity. It would surely be unreasonable to expect a small country like Bohemia to produce as large a number of illustrious men in any department of science or letters as countries with ten times its population. While I do not sympathize with the Czechs in their persecution of their German fellow-citizens, and consider the division of the old university of Prague to be in many respects an unfortunate occurrence, I do not like to see injustice done to any nation."

DR. ABERNETHY AND THE LATE GENERAL DIX.—In the biography of the late General Dix, written by his son, Morgan Dix, which has just appeared, is an account of an interview with the celebrated Dr. Abernethy. It will interest our readers especially, since it is known that the wisdom of the physician's advice carried General Dix from dyspeptic youth into eighty years of robust life. General Dix gives the account himself: "He received me with great civility, heard a few words of the story, and cut me short as follows: 'Sir, you are pretty far gone, and the wonder is you are not gone entirely. If you had consulted common sense instead of the medical faculty you could probably have been well years ago. I can say nothing to you excepting this: You must take regular exercise, as much as you can bear without fatigue, as little medicine as possible, of the simplest kind, and this only when absolutely necessary, and a moderate quantity of plain food, of the quality which you find by experience best to agree with you. No man, not even a physician, can prescribe diet for another. "A stomach is a stomach;" and it is impossible for any one to reason with safety from his own to that of any other person. There are a few general rules which any man of common sense may learn in a week—such as this: That rich food, high seasoning, etc., are injurious. I can say no more to you, sir; you must go and cure yourself.'"

A NEW METHOD OF DIAGNOSING CANCER.—In the *Journal de Medicine*, of Brussels, Dr. W. Rommelaère publishes a series of clinical observations illustrating a new fact in the pathology of cancer. He finds (in thirty-four cases) that in persons subject to cancer the amount of urea daily eliminated progressively diminishes until it is below twelve grammes. By studying the urea eliminated in cases, for example, where doubt exists between gastric ulcer and cancer, a diagnosis can be made. In twelve cases of gastric ulcer the daily urea elimination was about twenty-five grammes.

A NAIL EMBEDDED IN THE BRAIN.—In an autopsy on a patient dying in one of the Vienna hospitals, there was found in his brain an iron nail covered with rust, which to all appearances must have been there since early childhood. The man was about forty-five years of age, a bookbinder, and always passed for intelligent. Negative popular evidence, however, is of but little value. The man, at regular intervals, had epileptic attacks, and post-epileptic mental phenomena while in the hospital. —*Medical Press and Circular.*

DANGER LURKING IN SODA WATER.—The public analysts of Montreal and Toronto, Drs. Edwards and Ellis, have been examining samples of soda water, and report that in the majority of cases lead and sometimes copper is present. Dr. Edwards examined twelve samples purchased in Montreal and found lead or copper in ten of them. Five contained both lead and copper, and five contained lead only. In some samples only "traces" of the metals were found, while in others the water was "largely impregnated" with one or both of the metals. Dr. Ellis in twelve samples of Toronto soda water found only three which were free from lead. No mention is made of the presence of copper. The quantity of lead varied from .07 of a grain to .5 of a grain to the gallon, the average of nine samples being .32 of a grain. All of the above samples were taken from fountain cisterns, bottled soda water being invariably found free from metallic impurities.—*Sanitary Engineer.*

A Formula for Use in Irregular Heart Action.—In a discussion upon heart disease before the Boston Society for Medical Improvement, Prof. Bowditch said that he had found the following formula of great service in relieving even the most serious cardiac affections. He had used it for the last twenty-five years:

℞. Pulv. digitalis ..... gr. x.
Pulv. colchici sem. ..... gr. xx.
Sodii bicarbonatis ..... gr. xxx.
M. et div. in pil. No. 20.

These are to be taken three or four times daily at first; subsequently to be reduced until only one is taken at bedtime; the treatment to be continued for three to nine months.—*Boston Medical and Surgical Journal.*

The Pollution of Water at Summer Resorts.—The Albany *Argus* reports the prosecution of F. G. Crosby, proprietor of the Crosby Side Hotel, Lake George, for draining the sewage from his premises into the lake. Suits were brought against him under a recent law which forbids, under penalty of $300 for each offence, depositing or allowing to flow into Lake George any sewage or other polluting matters. The complainants withdrew the prosecution upon Mr. Crosby's agreeing to tear up the drains in their presence, which he is said to have done. Complaints of a similar nature have been heard from other quarters, notably from tourists in the Catskills.

Dangerous Sugar of Milk.—The American Institute of Homœopathy is becoming alarmed because of impurities discovered in sugar of milk. At its last meeting it resolved that any sample of sac. lac. yielding a residuum, after incineration, of more than 1½ milligramme to each 10 grammes should be considered unfit for homœopathic use. This is right. Any impurities existing in a greater proportion than 15 to 100,000 must be exceedingly dangerous, if not absolutely fatal.

Treatment of Lichen Ruber by Unna's Ointment.—Dr. Bockhart reports the cure of a case of lichen ruber in three weeks by the use of Unna's ointment. This is composed of one part corrosive sublimate, twenty parts carbolic acid, and five hundred parts diachylon ointment.—*Centralbl. für Chirurgie*, August 11, 1883.

More Trouble in the London Hospitals.—For some time past there have been heard smothered complaints of the autocratic government insisted on by the matron of the King's College Hospital, and her aggressive attitude is said to have caused much justifiable discontent among students and staff. At length, however, the resignation of the matron was insisted on, and, after prolonged refusal, received. All of the head nurses, who sympathized with the matron in her opposition to the medical staff of the hospital, deserted their posts and left the building as soon as the fact of the matron's resignation was announced. In commenting on this occurrence, the *Medical Press and Circular* says: "That the lady would cling to her position as long as possible is to be expected; but what is really incomprehensible is that her subordinates should so far forget the traditions of charity and duty as to make the forced resignation of their principal an excuse for their own withdrawal from the wards without previously giving notice of the intention. All honor, be it added, to the nurses who, notwithstanding the absence of pretensions claimed by 'lady' nurses, remained with true womanly pity at their posts beside the beds of suffering patients, the while their cultivated 'superiors' followed in the wake of the indignant matron. Spite of the temporary inconvenience, the authorities of King's may congratulate themselves on a good riddance of women who could be guilty of so grave a dereliction of duty."

A New Journal in Mexico.—A new recruit in the ranks of medical journalism has appeared in Mexico under the title of the *Revista Médico-Quirúrgica.* It is to be published three times a month, and its first issue bears date of August 10th. In its English prospectus it claims to be "the first publication of its kind in the Republic of Mexico which has such a broad spread circulation so much in the country as abroad." It is to consist mainly of selections from foreign journals, and its first issue contains a number of good abstracts, chiefly from French and German sources. The editors are Drs. V. Blay, T. Noriega and J. Robles. We welcome our young contemporary and wish it a long and prosperous life.

Report of a Fatal Case of Intestinal Obstruction following Peritonitis.—Dr. Edgar A. Mearns, sends us the history of a case of the above character. "The patient, a young man aged nineteen, had had general peritonitis four years before. Since then he had suffered from occasional attacks of abdominal pain and constipation. The last and fatal attack came on July 30th and continued eight days. He was obstinately constipated. Large doses of castor oil, combined with copious rectal injections were given. There was no fever nor tympanites and no great pain. Vomiting was present, and on the fifth day it became stercoraceous. On the sixth day an injection of warm water and oil was passed high up into the large intestine. It brought away hardened fæces. The vomiting ceased temporarily and it seemed that the obstruction had been overcome. Next day vomiting returned, however, and the patient died from exhaustion. An autopsy revealed the intestines matted together by the old peritonitis. The site of the obstruction was a tangle of united loops of intestine in the small gut, about the middle of the ileum. The vitality of this portion of the intestine was destroyed before death; and the loops were so tightly bound together by strong fibrous bands that the gut was perforated at each attempt to separate the coils by the most careful dissection. The gangrenous condition was produced by pressure in one of the loops, which was greatly dilated and hypertrophied by partial closure of the gut at the point of union of the loops of intestine. There was an accumulation of fæces in one of them, the outlet of which was stenosed. During the progress of this case the question of attempting to afford relief by the operation of laparotomy was discussed. The autopsy showed that laparotomy, if performed, should have been done early; and, even so, the intestines would probably have been irreparably damaged in forcing the fæces past the constriction, so that the probability of success would have been slight. As the sequel proved, the condition was relieved without operation; and had relief come a little sooner, while the patient was vigorous, he might have been saved for another occasion. Dr. Henry B. Sands records in The Medical Record, vol. xxi., p. 429, April 22, 1882, the result of a laparotomy done upon a precisely similar case, as follows: 'The patient was a man about thirty, who had suffered from acute obstruction for a week before the operation. No exact diagnosis could be made. When the abdomen was opened, the intestinal coils were found extensively adherent to one another, in consequence of former peritonitis; and a careful search failed to discover the nature or seat of the obstruction. The abdominal wound was closed, and the patient died soon afterward from exhaustion.'"

A Remarkable Case of Compound Comminuted Fracture of the Frontal Bone, with Recovery.—Dr. L. Tibbets, of Rockford, Ill., sends us the following history. A young man, aged twenty-nine, weight one hundred and twenty-eight pounds, was working at an emery wheel, fourteen inches in diameter, and revolving three thousand times a minute, when it suddenly burst, and a fragment struck him on the left half of the frontal bone. He fell down and was unconscious and quiet for about ten minutes; then violent muscular movements appeared. The frontal bone was depressed, the brain visible and pulsating. Four persons held him while Dr. Tibbets removed eight large fragments of the bone. The patient

was then more quiet. Hemorrhage was profuse, the brain membranes, longitudinal sinus, and a branch of the middle meningeal artery being lacerated. The wound was bandaged, and the patient carried home in a hack. "On the way home," says Dr. Tibbets, "he vomited blood several times, and after arriving, I gave him chloroform to quiet him while removing other pieces. One piece of the orbital plate, also a piece of the internal angular process of the frontal bone and orbit weighed one drachm. The number of pieces removed was nineteen, weight of largest (two of same weight) was one drachm. One piece was found on the opposite side of the shop, forty feet from where he stood. The combined weight of all the pieces found and removed was five drachms twenty-five grains. Hemorrhage was controlled by twisting the meningeal branch, and powdered persulphate of iron applied to the brain surface where the vessels were torn, and the wound left open until all oozing stopped, which was three hours. At two places on the left lobe, anterior, there were seen protrusions of brain matter about three-eighths of an inch in diameter. The wound was crucial shaped, extending from the root of the nose toward the middle of the left frontal bone. The flaps of skin were drawn together and a rubber drainage-tube inserted. Fluid extract of ergot 3 j., and codeia, ¼ gr., were ordered every three hours. Some hours later he became conscious and would answer questions. Slept well that night. Next morning he could speak, take nourishment, and sit up. Temperature normal. Carbolized cloths were kept upon the wound. By the fifth day he was able to sit up half the time in a chair. At no time after the injury did he complain of any pain. The highest point of temperature reached was 102°, and this only for one or two days. For three weeks after injury he complained of seeing double. Though after this, his sight became normal and mind clear. I gave him examples of figures to add, columns five figures in length and nine in number, to test his memory and condition of mind. He added these readily and correctly. He sat up most of the time. In two months he walked over a mile. He had then been keeping books for the company for three weeks. I tested his sight, and found in each eye vision normal. He recently moved to Oneida, N. Y. Before leaving was able to transact business, as before injury. There was left a depression in forehead, when the bone was taken out, but, on pressure, it seemed quite hard. I have seen reported but one case similar to this, in 'Erichsen's Surgery,' page 287, when there was a comminuted fracture of frontal bone, where there were twelve pieces of bone; patient died on the ninth day. These recoveries are considered very doubtful. I have not seen, or been able to find a case reported, parallel with this, both for extent of injury and perfect recovery."

THE NERVE-CENTRES FOR UTERINE CONTRACTIONS.—Dr. Dembo claims to have discovered the ganglia concerned in the production of contractions of the uterus. He says they are situated in the anterior wall of the vagina, and are independent of the spinal cord.—*Centralbl. f. Gynäkol*, August 11, 1883.

THE USE OF ATROPINE AND MORPHINE BEFORE ANÆSTHESIA.—Dr. Aubert, of Lyons, lately forwarded a paper to the Biological Society of Paris on the Advantages of Combining Atropine with Morphia in Hypodermic Injections, in the following circumstances: 1. In all cases where injections of morphia are indicated, the analgesic action of the morphia being then considerably increased by the addition of atropine. 2. As an adjuvant to the anæsthesia produced by chloroform or ether. The nauseating effects of the substances are at the same time suppressed, which by the efforts of expectoration may, in syphilitic subjects, be attended with great danger to the surgeon or to his assistants. 3. The tolerance of the morphia is so increased by its association with atropine that it could be administered even a few minutes after a meal without any fear of the supervention of vomiting. In the discussion that followed M. Poncet observed that all the means which tend to palliate the inconveniences of chloroformization have the effect of prolonging to a dangerous degree the anæsthetic sleep, which he considers undesirable, as it is preferable for the subjects operated on to recover their senses as soon as possible. Dr. Brown-Séquard then remarked that the employment of atropine has precisely for effect the diminution of the soporific action of morphia.—*Louisville Medical News.*

CONFIDENCE IN THE PROFESSION.—The following story, told in connection with a terrible outbreak of cholera on board an emigrant steamer, illustrates a remarkable degree of confidence in the profession. The deaths on board were so numerous that, for the purpose of indicating to the boatswain employed in removing the dead for burial, a cross was chalked against the berths where the corpses lay. By mistake, the fatal mark was attached to a berth where the inmate was engaged in a sound sleep. On the boatswain seizing him by the legs for removal, the intended victim called out loudly that he was not dead, but asleep—a remonstrance which drew from the old Scotch sailor the rejoinder, "Tut, tut, mon; the doctor knows better than you;" and who forthwith proceeded to endeavor to execute his commission.

TONGUE DEPRESSORS.—Dr. W. S. Gee, of Hyde Park, Ill., writes: "The article on the above heading, in a recent issue of your indispensable journal, calls to mind the statement of an old physician that 'many an instrument is uselessly modified merely for the sake of having the inventor's name attached.' This should be qualified in most cases, no doubt, but it is evident it is fitting occasionally. It has been my experience and observation with these instruments that most of them are not practically safe. I have used many different kinds and have decided on this course: For office use I have a glass rod, eight inches long and one-fourth of an inch thick with smooth rounded ends. This is easily cleansed, giving the least possible danger of transferring diseases. Is easily used, does not gag the patient, and in every way is more agreeable. When the necessity for the use of this instrument arises away from the office it is easy and fitting to call for a teaspoon, and I am sure an intelligent patient prefers this to a depressor taken from the pocket, which naturally enough excites his curiosity (silent, perhaps) to know when and where it was used last. If an examination of the throat with the laryngoscope is desired, Sass' is a useful one. A little more practical simplicity in our instrument makers is desirable."

A LARGE FAMILY.—The Madrid *Estafette* states that a Spanish gentleman, Señor Lucas Nequeiras Saez, who emigrated from his native land to America seventy years ago, recently returned to Spain in a steamer of his own, and brought with him the whole of his family, which consists of no fewer than 197 souls, sons-in-law and daughters-in-law not included. Señor Saez has been three times married. His first wife had 11 children at 7 births, his second had 19 children at 13 births, and his third had 7 children at 6 births. The youngest of this family of 37 is aged nineteen; the eldest, who is seventy, has 17 children, of whom the first-born is forty-seven. Of Señor Saez's 23 sons, all of whom are living, 13 are married, 6 are unmarried, and 4 are widowers; and of his surviving daughters, 9 are married. The granddaughters number 34, and of these 22 are married, 9 are unmarried, and 3 are widows; and of the 45 grandsons, 23 are married, 17 are unmarried, and 4 are widowers. There are also 45 great-granddaughters, and 39 great-grandsons, of whom 3 are married. Señor Saez has never tasted wine or any alcoholic liquor, and lives chiefly upon a vegetable diet, with but little salt. In spite of his ninety-three years, he is still hale and hearty, and makes a point of walking briskly for at least three hours every day.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 12 NEW YORK, SEPTEMBER 22, 1883 Whole No. 672

Original Articles.

CONGESTIVE INDIGESTION.

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THERE are two conditions where indigestion is due to vascular congestion: one acute, the other chronic.

Acute congestive indigestion is often an alarming condition; so much so that death from exhaustion is imminent in many cases. When it is due to an irritant poison, death often is the result; but cases of irritant poisoning will not be included in this sketch, though the treatment here given applies after the specified measures for the particular poison have been adopted. The main indications of acute congestive indigestion are vomiting (especially when anything is taken into the stomach), and a red irritable tongue. There is usually a good deal of excitement present, though this may be masked by the exhaustion which is soon induced. In consequence of the rejection of all food, including liquid matters, the fauces are dry, and much thirst is experienced. The consequence is the patient craves for fluids and swallows them eagerly, with the result of their speedy rejection by the irritable stomach. The condition is one which requires a very steady hand on the reins, as well as considerable professional knowledge, for its successful management.

In the first place it is well to make sure that the case is not one of reflex vomiting from some irritation in the pelvis, as a pregnant womb, or an irritable ovary, especially if the patient be a young woman. Reflex vomiting does not carry with it any rise of temperature, and, what is certainly equally important, does not alter the aspect of the tongue. When vomiting occurs with a clean normal tongue, it is clearly not connected with primary disturbance in the alimentary canal. This is a very important matter, and forms a trustworthy broad guide in practice to the line of investigation to be taken in order to clear up the nature of the case; and here correct diagnosis gives the clue to the appropriate measures to be adopted. Still, practically, there ought to be no difficulty in making the diagnosis betwixt reflex vomiting and congestive indigestion. Taking the tongue as the guide, the mucous lining of the stomach is vascular, and that organ, bodily, irritable, and ready to resent the intrusion of any fluid. The thirsty sufferer gulps down a quantity of fluid, only for it to return almost as soon as down. The stomach is tender to the touch; and is contracted—in all probability, for exact physical examination is impracticable. The bowels are constipated because they receive little or nothing from the stomach. Diarrhœa may be present as a troublesome complication.

In such a condition the great problem to be solved is how to feed the patient? It is quite clear that exhaustion is not far distant; and that the measures taken shall be prompt and effective. No medicine is retained, so it is impossible to soothe the stomach by opiates given internally. Of old there were two courses open: (1) to raise a blister quickly over the stomach and dust the raw surface with morphia; and (2) to throw up a starch enema containing a dram of laudanum. Now, fortunately, the hypodermic syringe supplies us with a ready means of bringing the system, and with it the stomach, under the influence of opium or its derivatives. And in employing the syringe a cautious boldness is indicated. A full dose should be given at once; timidity suggests small doses repeated at short intervals. My own preferences are in favor of a dose which will probably procure sleep. After a few hours of sleep the stomach will be found much less irritable. At the same time an enema of pancreatized milk gruel, or of baked flour and peptonized beef-tea, might be administered when the patient is beginning to come under the influence of the opiate. If this can be given without much disturbance, and the enema is retained during the sleep, the patient will awaken considerably refreshed.

If necessary both manœuvres may be repeated. If the thirst be great, then chips of ice may be given to the patient to suck, and as the cool moisture passes over the fevered fauces relief is given. The room should be darkened, and the nurses should be as quiet as mice in their movements and sparing of speech; while whispering should be absolutely forbidden, for it is far more disturbing than speech. Watchful, deft-handed attendants are desirable, who can place a cloth moistened with vinegar or salvolatile, as circumstances require, over the aching brow without any unnecessary disturbance of the patient.

Such should be the line of treatment in what may be called critical states. As soon as the stomach is somewhat quieted down it is well to give a small opium pill. This might consist of one grain of opium in powder made up with half a grain of extract of opium. Such a trifle will scarcely offend the stomach, and is retained. If, however, the presence of even this trifle is resented, and the pill is thrown up, then make a lesser pill still, say one-fourth of a grain of morphia, by preference the muriate, with half a grain of the extract of opium. If the stomach have been at all soothed by the hypodermic injections, probably this will be retained. If not, administer an hypodermic injection, and when the patient is coming under the influence of it, try the little morphia pill again. If it is retained, then the local sedative action of the opium is secured, and this once achieved the after-treatment of the case becomes simple. It is in the treatment at this critical stage that the knowledge, the patience, and the resources of the physician are most taxed; when the patient is in much suffering, and perhaps thereby rendered unreasonable; while the relatives are almost beside themselves with apprehension on the one hand, and eagerness to be of some service on the other. Once the little mite of a pill is kept down, then the corner is turned in all probability.

The line on which the physician must proceed is distinct enough and intelligible enough; but it is easier described than followed out in practice. The patient craves for drink; the friends are anxious to give it; but the contracted, irritable stomach resents the presence of any bulk of anything fluid or other, and ejects it; the attempt having only further irritated the stomach, while no good end has been served.

Once having placed the pill successfully in the stomach, where it has remained, then the case moves on. The ice may now have a food-value attached to it, by freezing milk and giving a chip from time to time to be sucked. Or some rose-water containing some sugar, or other sweet and palatable fluid may be frozen and chips be given to the patient from time to time. But this must be done cautiously and no acid enter into the composition of the frozen fluid on any account. Acids, even

vegetable acids, though agreeable to the palate, are injurious to the irritated mucous membrane.

How long a hypodermic injection and a nutritive enema must be continued, at bedtime, mainly depends upon the circumstances of each case. When small sips of milk can be retained, and frequently taken, then the necessity for these measures is materially reduced. But the quantity taken at once must be kept very small; if vomiting be again set up, the steps must be cautiously retraced. The tiny opiate may be continued at bedtime for some time, even after a mixture is practicable. Bismuth with an alkali and a little solution of morphia, or some plain laudanum, or other galenical preparation, may be given twice or three times a day, and soothes the mucous membrane famously. Such is the line to be pursued patiently and cautiously; whether there be simple gastric disorder, or the condition come on in the course of some other malady, as typhoid fever. One great matter scarcely enough thought of is the amount of curdling of the milk which may go on in the stomach. If too firm a curd be formed it does not properly dissolve again, but remains a source of irritation to the stomach. When vomited the condition of matters is readily revealed. But if the curd pass downward it may escape notice. Should masses of hard curd be found in the motions, the milk must be mixed with some farina and a fixed alkali, like prepared chalk or calcined magnesia, be added, which will prevent the formation of too firm curd. When the firm curd is formed, it involves not only the wasting of the milk as a food, the patient being no better for it, but the greater matter, viz., irritation of the bowels till diarrhœa may be set up, or even some muco-enteritis. Frequently, indeed, is it necessary to give a more potent alkali than lime-water with milk when too firm curdling is found, and then the chalk or light magnesia can be stirred into the milk with a little biscuit powder if desirable, just before the patient drinks it.

But whatever is given let it be in small quantity at once, else the irritable, contracted stomach will certainly reject it.

An acute condition of congestive indigestion is found along with alcoholic excess under two totally different circumstances. First, after a debauch where the alcohol has been so concentrated that the mucous lining of the stomach is congested, almost inflamed. There is thirst and fever, and the sufferer drinks greedily, the fluid being retained only a very brief time. Then it is well to give the patient milk and soda-water, the carbonic acid gas acting as a local sedative. The little mite of a pill (mentioned above) may be given also, twice or three times in the twenty-four hours. As to how far the patient may have some effervescing beverage containing alcohol is a matter to be determined betwixt the patient and the physician in each case.

Then, at other times the case is rather as follows: The patient is acutely ill and is being plied freely with brandy and water, or its alcoholic equivalent, under the impression that exhaustion will thus be averted. But the tongue gets redder and the stomach more irritable and the bowels more tympanitic, until it is only too clear that the alcohol is producing acute congestion. Then the alcohol must be withdrawn, however strongly the general condition may seem to require it, for the gas evolved in the stomach and bowels presses up the diaphragm and not only prevents its descent, but the pressure embarrasses the heart. Indeed, the elastic pressure of the gas impedes both the respiration and the circulation, and consequently the alcohol is doing more harm than its stimulant effect counterbalances. Unless the alcohol be promptly stopped, under these circumstances the patient will probably sink. If there be no other remedy feasible the alcohol may be administered per rectum. (Probably the subcutaneous injection of strychnine would maintain the action of the centres of the circulation and the respiration as effectually as alcohol could do.) This last aspect of the relations of alcohol, given medicinally, to acute gastric congestion is often overlooked; yet the condition is not so very rare! So much then for acute congestive indigestion.

Chronic congestive indigestion is found with all maladies which impede the blood-flow in the portal circulation. Consequently it is found with failure of the right ventricle, whether this be consequent upon a mitral lesion, leading to pulmonary congestion, or there is present some condition affecting the lungs generally, as emphysema or cirrhosis. Or it may be some hepatic condition which gives rise to the portal congestion, as cirrhosis or cancer. The effect is to produce fulness of the gastric venules, with a catarrhal condition of the stomach while the gastric juice is diluted, and therefore diminished in potency. The prominent sensation complained of by the patient is "sense of fulness," even when the stomach is empty. Why this sensation should be found with this fulness of the gastric veins, it is not easy to say, but the fact remains. The difficulty of digestion in all such cases is very great, and the management of the condition no easy matter. The impeded blood-flow affects the arterioles and the gastric fluid is sparingly formed, and is of enfeebled energy, being diluted from the venous fulness, and effusion resulting therefrom. Yet the nutrition of the heart and the respiratory muscles must be maintained, else it is clear the patient will soon sink. The food must consist of the blandest and most easily digested material, containing no solid materials, which would only be covered with a layer of mucus as it is rolled over and over by the movements of the stomach.

Milk and seltzer water, beef-tea or chicken broth with some biscuit powder, must form the dietary if the case is very serious. If the dyspepsia be slighter, then some milk gruel, milk puddings (made without an egg), or even white boiled fish may be sufficient. As improvement is made, the dietary may be made even more substantial, and nice thin sandwiches made with potted meat, stewed fruit and cream may be permitted. As to alcoholic fluids, if they agree and help the patient to eat and digest, there is no valid reason why they may not be allowed. Then as to direct medical treatment; at times some astringent, as compound kino powder, may be indicated by a catarrhal condition.

But the treatment *par excellence* is the relief of the venous congestion; and the stomach is needed for a good deal of medicine, as well as food. There is the filling of the arteries and the emptying of the veins, the improvement of the arterial blood-pressure, for which digitalis and its allies are available. The increase in the blood-pressure produces a freer flow of urine, and that is good—as well as a good indication of the medicine is acting well. As in all cases of right-side embarrassment the respiration is impeded, it is well to add some respiratory stimulant, as strychnia for instance. Such respiratory stimulant usually adds much to the efficiency of the stimulant to the circulation; and digitalis is rarely, if ever, indicated where the addition of strychnia is not also suggested, and the combination gives the best possible results. In some cases too, where digitalis does not suit the patient, the addition of strychnia will at once produce good effects. (This is a matter of such importance in practice, in my experience, that I beg the reader to give the subject his best attention. Some time ago I was called to a case in the country, where digitalis, potash, and scoparium with elaterium had been given, with the result that the dropsy was rising, in a case of mitral stenosis. It was quickly apparent that the respiration rather than the heart was failing, and ammonia with strychnia was substituted for the potash, with almost magical effect; and the new direction has been maintained. All that has been said about the venous congestion, of right heart embarrassment, and its effects upon the gastric venules, was well pronounced in the case.)

By such means, together with a smart cathartic once or twice a week, which drains so much water away by the bowel, the condition of venous congestion is greatly re-

lieved. And a smart cathartic means a full dose of the agent adopted, which may be a pill of one-sixth of a grain of elaterium, or a powder of one-tenth of a grain of elaterium with ten grains of compound scammony powder. The good of such a full dose is to secure its acting freely. This is what Dr. King Chambers says: "In all forms of dropsy the effect which you desire to produce by remedies is strikingly dependent on the condition of the alimentary canal. Where the portal system is congested, I have given that strongest of purgatives, elaterium, in doses gradually augmented up to three grains, without any of the vigorous hydragogue action naturally following, and then, by applying a few leeches to the anus, so as to disgorge the abdominal veins, half a grain has produced excessive purgation with reduction of the dropsy." The reader may think the doses of elaterium here spoken of as certainly heroic. But when a patient is water-logged in venous fulness, the effect of a brisk cathartic is very different from what it is on a healthy person. There may be some risk of exhaustion or syncope at the time of the catharsis to be guarded against by free recourse to stimulants, if necessary, but the immediate after-effect is a sense of distinct relief.

Stimulants to the circulation, with respiratory stimulants, improve the circulation, while free catharsis relieves the venous fulness; these are the great measures to be adopted in chronic gastric congestion leading to indigestion—*i.e.*, measures addressed to the circulation. Then the dietary must be adapted to the state of the digestion, and some artificial pepsin may be very useful to help the dilute, feeble natural pepsin in the work of digestion.

Gastric catarrh is not, however, always the effect of venous congestion, and then astringents are clearly indicated. But when it is the outcome of obstruction to the circulation the cardinal measure to be adopted is the improvement of the circulation, upon which the gastric catarrh is relieved.

CIRCULAR RESECTION OF THE INTESTINE,

AND CONSEQUENT UNITING BY SUTURE, WITH THE HISTORY OF TWO CASES.

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ABDOMINAL surgery has within the past ten or fifteen years received the attention of the most eminent surgeons, and nevertheless many points are still so unsettled that every contribution, be it ever so slight, should be received by the profession with interest.

Especially is this the case in operations upon the stomach and intestines, and every experience ought to be carefully recorded, so that deduction may be made and guide us in further researches. These operations have many enemies, and the results of those who operate will be watched with the greatest interest, and probably closely criticised.

It will be the province of this paper to speak especially of circular resections of the intestines for cases of gangrene from strangulated hernia, not including wounds of the intestines produced by accident, or where during the progress of other abdominal operations it has become necessary to remove a piece of intestine, nor the wonderful achievements gained from resections of the pylorus.

Ramdohr removed a piece of intestine (small intestine probably) two feet long, and united the ends by suture, in a case of gangrene from hernia, as early as 1727, and with good result. This was followed ten times, up to 1836, by French, English, and German surgeons, with the following results: five were cured completely, two had an artificial anus, and three died. From 1836 to 1875 it seems nothing was done in this line, and it is due to Langenbeck (1875), Kuester (1877), and Czerny (1878), to have revived this important operation. Since then the operation has been done thirty-four times, with twenty deaths, making in all forty-four operations and twenty-three deaths. This, after a collection of cases by Mandelung and Rydygier, in November, 1881. Since then I have found notes of one case by Rydygier (*Berlin. Klin. Wochenschrift*, September, 1882), which was successful, and another by Dr. Q. A. Aman, in December, 1881 (*Schmidt's Jahrbücher*, 1881, p. 286), which was fatal.

A third case was reported by Dr. H. O. Marcey, of Boston, Mass., who operated in 1881, and to whom I am much indebted for the notes of his case. The case proved fatal.

The cases reported by Dr. G. D. Beebe, of Chicago; R. S. Sutton, of Pittsburg, Pa., and Wm. A. Byrd, of Quincy, Ill., do not properly belong to the scope of this paper, though the results, especially of the latter two, are very gratifying.

To this I should add two cases of my own, of which one recovered and the other was fatal. This makes a grand total of forty-nine operations and twenty-three deaths, or forty-nine per cent.

CASE I.—Strangulated hernia, seven days' standing, resection of large intestine, fecal fistula, cured. Mrs. S. M——, born in Russia, twenty-four years of age, widow, and mother of two children, aged seven and five respectively. Shortly after the birth of her first child she noticed a lump in the left groin, which she never entirely lost.

On April 2, 1883, she suddenly felt a pain in the left inguinal region, for which she sought medical advice.

On the fifth day thereafter, late in the evening, she was taken to the German Hospital of this city, where I found her in my ward on the next morning. The patient had a large swelling in the left groin, painful on pressure, of bluish-red discoloration, fluctuating, no impulse during cough, and no tympanitic resonance on percussion. She has not had a movement from the bowel since April 2d, and vomited mucus on the morning I saw her. She seemed very much depressed mentally. The pulse was 120, and temperature 100°. Alvine injections brought away very little fæces. Hot poultices were applied, and the house physician directed to get some of the history, just detailed, from the patient's friends, as it was difficult to understand her. The patient remained quite comfortable until the evening, when she showed signs of prostration, and a hypodermic syringe brought away some bad-smelling reddish serum. I decided to operate the next morning by opening the tumor and finding its contents.

April 9th—the patient was etherized, and after incising the skin the subcutaneous tissue was found infiltrated with a yellowish-gray matter of slightly fecal odor. Very soon I entered the hernial sac from which the fecal odor was penetrant. A piece of grayish-looking gangrenous large intestine, which was perforated, was found. It was a femoral hernia and the stricture so severe, that it was difficult to introduce even the tip of the finger. After dilating and cutting the stricture somewhat it was found impossible to draw the gut down. I decided to do laparotomy, take the gut from its confined position, cut the diseased portion off, and unite the ends by suture. I had been fully prepared for this both by getting all things ready for this formidable operation, as well as by making myself familiar with its technicalities by operating successfully upon lower animals.

The wound at the hernia, the sloughing intestine, and the sac were thoroughly washed with a two and one-half per cent. solution of carbolic acid.

An incision three inches in length was now made in the median line, just as in ovariotomy. The small intestines were highly inflated and very congested, but there was no general peritonitis. The gut which entered the canal was soon found, all the firm adhesions separated with the finger, the gut withdrawn and brought out at the wound in the median line. It was found that the gangrenous part was the lower part of the descending colon, and the mesentery just implicated. The peritoneal covering of the intestine in the neighborhood of

the constriction was very much inflamed. A small opening was made into the mesentery, and two clamps were placed upon the healthy part of the gut to prevent the contents from escaping. The gut was now cut through quickly with a pair of scissors about one-half inch from the dead portion at one place, some of the constricted portion being left.

The hemorrhage was severe, and the clamps being rather in the way, they were now removed and the ends of the gut firmly held by my friend, Dr. Kornemann, to whom I am much indebted for his careful assistance in this case. Fourteen ligatures had to be applied to bleeding vessels. I had great care exercised so as not to produce any laceration of the mesentery or separation of it from the intestine, which would produce gangrene, as has been shown by the researches of Professor Mandelung in a paper read before the Tenth Congress of German Surgeons in April, 1881. I now commenced placing sutures of finest silk (which had previously been boiled in a five per cent. solution of carbolic acid) with fine, non-cutting, slightly curved needles. The first stitch was inserted into the intestine close to the meso-colon and just including this. The second stitch was placed in the same position on the other side of the gut. The next just opposite the insertion of the meso-colon, and the rest midway between the two extremes, until about thirty sutures were applied and as close to each other as possible.

The mode of inserting the sutures was such as to catch up the peritoneum and muscular coat, and not to include the mucous membrane. At the place where the tissue was inflamed the stitches tore through easily, and double thicknesses of the silk were used.

The gut was returned into the abdominal cavity after this, and the former had been thoroughly cleansed of all blood, a drainage-tube placed into the retro-uterine cul-de-sac, and the wound closed with eight deep silver wire sutures. This was covered with silk protective and carefully prepared iodoformed cotton. The lower wound was thickly covered with iodoform and cotton placed over it. Temperature after the operation was 98°; pulse, 116; and respiration, 24. To prevent vomiting, one teaspoonful of hot water was given every fifteen minutes for twelve hours after the operation. In the evening, pulse, temperature, and respiration remained the same, but the tongue was dry and brown, skin moist, and patient complained of colic-like pains. There was slight tympanitis and occasional eructations of gas.

Hot barley-water was given during the night, and the patient remained quite comfortable.

April 10th.—At 6 A.M., eighteen hours after operation, the patient passed the first flatus, which was followed by an almost continual discharge all day. The eructations ceased and tympanitis disappeared, and there were very few colicky pains.

About 9 A.M. the dressing was changed, and about seventy-five grammes of grayish muddy-looking fluid removed from the drainage-tube. There was no unpleasant odor to this, still the tube was rinsed with a solution containing carbolic acid 1.5, soda chlor. 5.0, and water 500.0, and dressing reapplied.

The lower wound was rinsed with two and one-half per cent. sol. of acid. carbol., and covered with iodoform and cotton. During the day milk and beef-soup were given in small and frequent doses. In the evening there was neither a rise in temperature, pulse, nor respiration, though the patient felt very weak, and larger doses of nourishment were given.

April 11th.—Dressing changed, and ten grammes of light straw-colored fluid removed from the drainage-tube. Gases still passed by the anus and gave no pain. The patient was nourished as during the night, and at 2 P.M., fifty hours after operation, the patient had an abundant, soft, natural-looking movement from the bowels, with but little pain. A second movement occurred two hours later, which was very painful and streaked with a little fresh blood. A third movement followed at 6 P.M., and small doses of morphine were given to quiet the bowels.

April 12th.—The evening temperature rose to 100¼°; pulse and respiration were the same as before.

April 13th, 9 A.M.—Patient has a desire to evacuate the bowels, and cannot be kept from straining. Dressing was changed, and still a small quantity of fluid removed from the drainage-tube. Morning and evening temperature 100¼°.

April 14th.—Patient spent a restless night and had much straining. On changing the dressing quite a quantity of fluid fæces had escaped on the left side of the tube. This was five days after the operation. Patient's tongue was very dry, as was also her skin. Temperature 100¼°; pulse, 116; and respiration, 26. At this time I was utterly at a loss what to do about the drainage-tube; to remove it would probably allow fæces to enter the abdominal cavity and kill the patient, nor was there any object in keeping it there any longer. The skin about the drainage-tube was thoroughly rinsed with two and one-half per cent. sol. of acid. carbol., and in the evening the same thing was repeated; but I was still meditating about the drainage-tube, which seemed to me a "nolle me tangere."

April 15th.—The quantity of fæces which escaped this A.M. was still larger than yesterday. I had decided to introduce through the glass drainage-tube a smaller and shorter one of soft rubber. This was done without any difficulty, but a large quantity of fæces followed the tube. Patient was very comfortable, and flatus were always passed per viam naturalem.

April 16th.—Dressing changed; drainage-tube removed, as it was filled with fæces, and wound well rinsed with two and one-half per cent. sol. of acid. carbol.; two silver sutures removed, and iodoform dusted over the whole wound. Temperature was 101½°, and pulse varied between 120 and 130.

April 17th.—There was no reaction following the removal of drainage-tube. Two small abscesses formed along two silver sutures and these sutures were removed. In the evening warm water was injected into the rectum with an irrigator. After a pint had been injected the water came from the fistula.

April 18th.—The last stitches were removed to-day. Patient partakes freely of beef-soup, milk, finely chopped beef, and toasted bread. During the night patient passed several scybalæ per anum.

April 19th.—Patient's temperature rose to 103° without any definite cause. The fistula carefully cleansed, and again covered with iodoform. Patient again passed fæces by the anus.

From April 20th to April 25th the condition remains the same, except that the temperature came down to 100°.

May 1st.—The quantity of fæces from the fistula decreases as the quantity voluntarily passed by the anus increases.

May 2d.—No discharge from the fistula, and a well-formed passage by the anus.

Nothing more can be added to this already somewhat lengthy history, but that no bad symptoms followed the last date, and patient was dismissed cured entirely about fifty-one days after the operation, and remains so to this day.

CASE II.—Strangulated inguinal hernia, operation, cure; strangulation recurs, eight inches of small intestine gangrenous, resection, peritonitis, death. F. K——, fifty-seven years of age, iron-worker, German, has suffered for four years from a right inguinal hernia, and for sixteen years from chronic gout, resulting in great deformity of hands and feet. Early in the evening of July 7, 1883, the rupture came down, and could not be reduced by the patient. He did not seek advice until July 8th, when he was sent to the German Hospital by my colleague, Dr. F. Schmasher, who requested me to operate. The patient was relieved by ordinary herni-

otomy, the sac not having been opened. The patient made a good recovery until July 20th, when, at 2 A.M., the rupture suddenly reappeared during exertion of turning in bed. Pains gradually increased. I saw him at 10 A.M. He was greatly prostrated, had a temperature of 102°, and his abdomen was tender and tympanitic. Taxis was applied without effect, and at 10 A.M. I operated to relieve the stricture. This time I was obliged to cut the sac, and, to my astonishment, I found the gut black and without the usual lustre. I cut the stricture and left the gut *in situ* to recover; if such was not the case, to remove the gangrenous portion as soon as I was prepared.

3 P.M.—The patient had been vomiting fecal matter in large quantities since the cutting of the stricture. The gut was re-examined and found to be in the same condition as in the morning, and I resolved to resect the gangrenous portion and unite the ends by suture. The gut was carefully drawn down through the inguinal canal, and eight and a half inches of small intestine removed. From the appearance of the healthy gut it was apparent that general peritonitis had already set in. The mesentery was ligated in toto, and the gut united as in the first case, except that a double row of fine silk sutures (Czerny) were used. From twenty-six to thirty interrupted sutures were used, and only three vessels ligated.

During the operation the gut became greatly distended and purple, partly from the slight constriction above and partly from the force which had to be applied in bringing the gut out to be conveniently handled. A rubber drainage-tube was inserted to the abdominal cavity and the wound treated with iodoform. Patient was given morphia soon after he came to from the anæsthesia. Temperature, 102°; pulse, 126. He was greatly relieved from pain, vomiting of fecal matter recurred but once, eructations were frequent. He was treated the same as the foregoing case, excepting that morphine was given him for his peritonitis. During the following night patient suffered much from tympanitis and colic-like pain in the neighborhood of the wound.

July 21st.—At 7 A.M. temperature was 103° and pulse 132. Patient continued same as in the night. There was no great discharge from the drainage-tube, and brandy was ordered in large doses; ice-bags placed upon the abdomen. At 11 P.M. temperature was 105½; the first flatus passed, tympanitis grew less, and eructations ceased. Wherever hypodermic injections of morphia were given ecchymotic spots appeared.

May 22d.—At 7 A.M. the patient suddenly got a severe watery diarrhœa, which was ejected with such force that the fluid passage reached the foot of the bed. Temperature was 105¾, pulse hardly perceptible; hands grew cold, coma set in, and death ensued at 10.30 A.M., forty-two hours after operation.

A post-mortem examination was made at 12 M. The gut was firmly united by fibrinous adhesions, and was situated in the neighborhood of the right inguinal ring. General peritonitis was present, which caused the death of the patient.

It seems to me proper to analyze these two cases, to compare with others of a similar nature and to draw deduction, which may throw light upon future cases; for I believe the operation not only justifiable, but its range of application wide, and every surgeon may be called upon to do it and without great preparations. To illustrate this I should say that in the brief time of seven years I have been called upon to operate for strangulated hernia twelve times, and three times the gut was gangrenous. Of course, there cannot be any great preparatory treatment, which is always of so great importance in capital operations, except, I should say, that all antiseptic precautions, especially about the ligatures and sutures, should carefully be observed. As to where the operation shall be done; whether the gut be dragged down through the hernial opening and there cut off, or shall laparotomy be performed?

In Case I. I was unable to drag the gut down; the tissue was so infiltrated with fecal matter that I was afraid of infection and troublesome hemorrhage should I make large incisions into Poupart's or Gimbernat's ligament.

In Case II. this could be done to some extent, but the inconvenience occasioned by operating in a small space and the congestion of the gut produced by the constriction at the opening made the operation a great deal more difficult. Section at the median line is quickly and easily done, the gut handled readily, the peritoneal cavity cleansed with perfect safety, and drainage well established if thought prudent. I shall hereafter always prefer laparotomy. Concerning the resection of the gut itself. Before the gut is cut some preventive will have to be taken to keep its contents within. Some—Billroth, Gussenhauer, and others—recommend digital compression, to which I can only agree; while others advise the use of forceps (Kocher) or clamps (Rydygier), and still others ligate with catgut or silk. I think digital compression best, because the same assistant can keep the intestines in general from prolapsing, and will also be able to adjust the two ends of the intestine.

In describing the operation in Case I., I have said that I left part of the constricted gut. I shall be careful hereafter to cut away all the diseased portions, as the sutures cannot be relied upon in œdematous and swollen tissue. The greatest care must be exercised not to strip the gut of its mesentery, as gangrene of that part of the intestine will surely follow, as was shown by Mandelung and Rydygier in their experiments upon animals. If the mesentery is gangrenous it must be removed by triangular excision, the vessels ligated, and the edges brought together by suture; if not, it may be ligated *en masse* and separated from the intestine by cutting close to the part to be removed; or else the vessels may be ligated separately. I have preferred to ligate in toto before cutting off the intestine in Case II., and found this to work admirably. The intestine must be cut across at right angles to its axis unless one severed end is smaller than the other and would therefore not adapt itself. In this case it must be cut across at an acute angle to the axis and the insertion of the mesentery, thus affording a greater circumference.

Sutures.—Concerning the material the operators differ in opinion. Czerny, Billroth, and Mandelung prefer carbolized silk, while Shede, Dittel, Riedinger, and Rydygier prefer carbolized catgut. From statistics published by Mandelung and Rydygier, there does not seem to have been any difference as to the result, which was used. There is no doubt that silk is easier handled than catgut, and does not produce any more irritation, provided it be thoroughly antiseptic. It becomes absorbed readily, although not so quickly as catgut, and would from this cause be more reliable.

How to apply the suture.—Upon this rests the success or failure of the operation to the greatest extent; it matters little, it seems to me, what material is used, as I have said before.

After section of the gut, the mucous membrane, if it protrude too much, may be cut off so as to be on the same height with the serous covering. I have not found this necessary in my two cases. To begin with, I have applied two sutures to the intestine, one on each side of the mesentery and close to the mesentery, then on the side of the intestine directly opposite to the mesentery, then stitches midway between these two extremes, and so forth until all sutures are applied. This method will most likely bring the parts best into apposition. The sutures must be applied so that it will bring serous surfaces together. This can be done by enclosing in the suture the peritoneal covering and muscular coat only.

Czerny very ingeniously has practised the method of applying a second row of sutures over the first (Etagennaht), so as to imbed the first one between two peritoneal

surfaces, thus preventing completely the escape of intestinal contents into the cavity of the peritoneum.

Mandelung has used, with success, small plates of aseptic cartilage after the fashion of buckshot suture.

Jome Joppe, Nussbaum,[1] and Rydygier,[2] first apply a continual suture, and over this an interrupted one. Dr. H. O. Marcy, of Boston, has also applied a continuous suture. This certainly can be done quicker than the interrupted suture, but should one stitch tear, the whole work will have been useless.

I will not lengthen this paper by describing the different forms of invagination and following suture as was practised by Jobert and Mandelung, since it was not followed by good results.

The question naturally arises, how many patients die from a gangrenous gut due to strangulated hernia. I have taken pains to ask a number of prominent physicians in this neighborhood, to whom I am much indebted for their ready answers, what their experience was in this line. They have kindly furnished me with records of twenty-nine cases, of which twenty-five died, or eighty-six per cent.; this being an increase in deaths of thirty-seven per cent. over the operated cases, which certainly would show how justifiable the operation is, even in its infancy.

Out of the four cases which have recovered with an artificial anus, one recovered even from this spontaneously.

DOUBLE SALPINGO-OVARIOTOMY — RECOVERY.

REPORTED BY W. R. PRYOR, M.D.,

ASSISTANT GYNECOLOGIST TO ST. ELIZABETH'S HOSPITAL, NEW YORK.

History.—The patient is thirty-two years of age and married. She began to menstruate when sixteen years of age, and did so regularly up to the time of her marriage, ten years ago. Before and during her marital life she has suffered a good deal at each menstrual epoch. She has had two children, and two miscarriages; her last pregnancy resulting in a miscarriage about three years ago. Her present trouble dates from that time. For six weeks after this abortion she bled almost continuously, and at the same time suffered very acute pain in her pelvic organs. The symptoms were thought to be due to a laceration of the cervix uteri, which existed, and for which an operation was successfully performed by Dr. Watts. The bleeding ceased, but she remained in bed for over two months longer, with all the symptoms of severe pelvic inflammation. She improved a little, sufficiently to get up and walk about the room, but soon she had a relapse and was again confined to bed for many weeks. For the past three years this woman has continued in this way, alternately confined to bed with the most intense pelvic pain, which was relieved only by large doses of opiates; or up, scarcely able to walk, and every effort greatly increasing her suffering, she at last arrived at that point where life was made bearable by opium only; and she readily and eagerly accepted the proposition of an operation.

Examination.—The patient is thin, but in better health than we would expect to find her after hearing her history. The uterus was perfectly movable antero-posteriorly, but its mobility was very much restricted laterally, especially on the left side, in which direction it was slightly drawn. The left Fallopian tube could be distinctly felt as an enlarged and thickened cord, and most exquisitely sensitive to pressure. The ovary also of that side was very tender. There was not so much sensitiveness developed on pressure in the right ovarian region, but one could distinctly feel the ovary greatly enlarged. On examining her with Sims' speculum, we found a good deal of free pus in the vagina. This was wiped away, and she was again examined in the dorsal position. Placing her in Sims' position again, we found that more pus had entered the vagina, but no fistulous opening could be seen. On making gentle pressure in the region of the left tube, pus was seen to ooze from the os externum in considerable quantities. As the pus was quite fluid and not mixed with tenacious mucus, and as there were no signs of metritis or endometritis, we naturally came to the conclusion that the Fallopian tubes were the seat of a purulent inflammation.

The operation was performed by Dr. W. Gill Wylie at 3.30 P.M. A Sims uterine repositor was placed into the uterus, and gentle upward pressure was made with it, thus greatly facilitating reaching the uterus and its appendages from above. The primary incision was short, not more than three inches, being more exploratory than otherwise; it was subsequently enlarged. After the skin all the tissues were divided upon a broad director, and the abdominal cavity entered to the left of the linea alba. We found the left ovary prolapsed and somewhat adherent low down to the wall of the true pelvis, with the tube firmly adherent to the ovary. The right ovary also was adherent, but the tube of that side was free. The ligatures used were of silk, and two were applied on each side of the structures to be removed. This was rendered necessary by the extent and vascularity of the adhesions. In passing the ligatures we used a full-curved round needle, about two and one-half inches long. After tying off, and removing the left ovary and tube, the stumps were held up for a few moments to make sure that no bleeding was going on, touched with Paquelin's thermo-cautery, the ligature cut short; and the stumps returned. The same method of procedure was employed with the right appendices uteri. Having removed all free blood and clots from the pelvic cavity, and again examining the stumps for bleeding, the abdominal wound was closed with silk sutures.

The following extremely useful precaution was taken in this case: As soon as the abdomen was opened several temporary silk sutures were passed through each lip of the wound, and including all the tissues from skin to peritoneum, thus preventing the stripping back of the peritoneum from the muscles when the hands are passed into the abdominal cavity. Should this accident occur it is usually impossible to prevent the sutures tearing through the peritoneum when we endeavor to close the abdominal wound. After the operation a carbolized dressing was applied. Operation completed in an hour.

First Day.—Patient slept till 7 P.M., then awoke with some abdominal pain. Pulse, 90. 9.30 P.M.: Has been asleep since 7.45. Vomits very little. Pulse, 92. 11.30 P.M.: Has slept most of the time since 9.30. Slight pain. Hiccoughs occasionally, and has a little eructation of watery material. Temperature, 99°; pulse, 94; respiration, 16–18. Sleepy. 11.45 P.M.: Increase of pain, occurring spasmodically.

Second Day.—4 A.M.: Slept steadily up to 1.30 this morning. Since then she has awakened occasionally. Temperature, 99⅕°; pulse, 100; respiration, 20. Complains of thirst and slight chilliness. General condition excellent. Is quiet and mind calm, being disposed to drowsiness. 10.30 A.M.: Temperature, 100°; pulse, 92. 12 M.: Temperature, 99⅘°; pulse, 108; respiration, 10. 3 P.M.: Temperature, 100¾°; pulse, 100. For the first time allowed her to have nourishment—koumiss in ʒj. doses. 8 P.M.: Temperature, 101¾°; pulse, 118. Koumiss in ℥ij. doses. 10 P.M.: Temperature, 101⅘°. 11.30 P.M.: Temperature, 101°; pulse, 118. Since the operation fourteen ounces of urine have been drawn; she has taken ten ounces of koumiss, and has received gr. ijss. morphia, hypodermically. In the past twenty-four hours she has not vomited once, and has had but little pain.

Third Day.—10 A.M.: Temperature, 100°; pulse, 96. 3.30 P.M.: Temperature, 99½°; pulse, 108. 5 P.M.: Temperature, 99½°; pulse, 92. Midnight: To-day she

[1] Billroth and Lücke, Deutsche Chirurgie Liefer, 44, p. 136.
[2] Berliner Klin. Wochenschrift, p. 620, No. 42, 1881.

has taken nearly four pints of koumiss without in the least forcing herself; has received gr. jss. morphia, hypodermically; and fifteen ounces of urine have been drawn. Only once has she had pain. No vomiting.

Fourth Day.—10.45 A.M.: Temperature, 98¼°; pulse, 84. Commenced giving her the expressed juice of beef-steak cooked rare. 6.45 P.M.: Added pancreatized milk to her *menu*. 8.30 P.M.: Temperature, 99°; pulse, 88. Midnight: Dressed the wound to-day, under the spray. The first dressing was found but slightly stained by blood, and was perfectly aseptic. Firm union existed along nearly the whole line of incision. To-day she has received less than gr. j. morphiæ. Drew sixteen ounces of urine. Abundance of koumiss, beef juice, and pancreatized milk taken.

Fifth Day.—10 A.M.: Temperature, 98½°; pulse, 80. 10 P.M.: Temperature, 99½°; pulse, 108. After this the temperature never reached 99°.

Eighth Day.—Sutures removed. Line of union unbroken except at one point in the centre where there was some ectropion of the skin. To this raw surface applied iodoform dressing.

Tenth Day.—Simple enema given, followed by a large and painless stool, the first movement since the operation.

Sixteenth Day.—Out of bed. Morphia has been gradually decreased, and was entirely stopped to-day without any bad results except a slight exhibition of temper on the part of the patient.

Thirtieth Day.—On making an examination to-day, we find the following condition of things: The uterus is freely movable in every direction. Douglas's *cul-de-sac* is occupied by a knuckle of intestine which can easily be pushed up. On each side, running from the uterine stump of the tubes, and apparently terminating at the posterior vaginal wall opposite the os externum, is a firm fibrous band which is slightly sensitive to pressure. These, I think, are the result of a slight inflammation, which took place on the second day, when her temperature first reached 101¾°. Beyond this, and the absence of the organs removed, no indication of an operation exists.

Thirty-first Day.—Patient is menstruating. The flow is slight, and she has less pain than at any of her previous menstrual epochs. She has certain nervous symptoms, such as are often seen in women at the menopause.

Remarks.—The diet of this patient for the first few days is mentioned, because I think that it is one of the most important factors influencing cases of laparotomy. For the first twenty-four hours the woman received nothing into her stomach, except, occasionally, a teaspoonful of iced water. Had she been given, as is often done, milk and beef-tea *ad libitum*, her stomach, irritable as it was after the etherization, would most certainly have been markedly disturbed, and the efforts at vomiting would have defeated us in what we strive to obtain in these cases, viz., perfect rest of the abdominal organs. What little vomiting she did was more regurgitation than vomiting, as it was done without effort or nausea. When we did begin to give her nourishment, it was in gradually increasing quantities of the easily assimilated koumiss and peptonized milk. The quantity of morphia administered may seem excessive; but the effect produced upon this *habituée* was not more profound than would follow the taking of gr. j. opii t. i. d. by a person unaccustomed to its use.

107 EAST THIRTY-FIFTH STREET, NEW YORK.

TO DISGUISE THE TASTE OF MEDICINES.—Bitter and nauseous salines are best taken simply diluted with iced water. A mouthful or two of iced water, before or after the dose, to blunt the sense of taste, and the dose between them in a wineglassful of iced water, renders it easily taken by most persons.—*Squibb's Ephemeris.*

Progress of Medical Science.

PROLONGED SUSPENSION OF VITALITY FOLLOWING THE HYPODERMIC INJECTION OF MORPHIA AND ATROPIA.—Dr. Alexander reports the case of a woman, thirty-seven years of age, upon whom an operation had been performed for the removal of the left ovary. At noon, four days after the operation, she became very excited, and disturbed the dressings of the wound, so twelve minims of the hospital solution of morphia and atropine were injected. This represented three-fifths of a grain of morphia and one-fortieth of a grain of atropine. At one o'clock she became livid, and a nurse injected another five minims of the solution before the house-surgeon arrived. When he came he injected ammonia, gave brandy enemata, used artificial respiration, and applied electricity without effect. At 4 P.M., the nurse was laying the woman out, but Dr. Alexander came in and determined to proceed with artificial respiration, galvanism, and frictions. Up to 5.30 P.M., only a spasmodic breath every quarter of an hour, and a feeble beat of the pulse every now and then, could be detected. At 7 P.M., a nurse poured some coffee into the patient's mouth, and she suddenly fell back as if dead, but by turning her over on her side she was made to vomit. By nine o'clock the respirations were beginning to be more frequent and the pulse stronger; she soon became conscious after this, and recovered perfectly.—*Boston Medical and Surgical Journal.*

POISONING BY CARBOLIC ACID.—Mr. E. R. Williams relates the following case in *The Lancet* of August 18, 1883. A young girl, seventeen years of age, was admitted to hospital, having, it was stated, two or three hours previously taken poison, the nature of which, however, it was impossible to learn. She was completely anæsthetic, her muscles relaxed, eyelids closed, pupils dilated and inactive, skin cold and clammy, with large drops of perspiration running down the cheeks, temperature lowered, respiration feeble and shallow, the pulse at the wrist imperceptible, and the action of the heart feeble and intermittent. From this extreme state of collapse, by means of subcutaneous injections of ether, galvanism, etc., she gradually recovered. Careful examination revealing nothing as to the nature of the poison, it was deemed advisable to give her one-eighth of a grain of apomorphia subcutaneously. In fifteen minutes she expelled, with a gush, about five ounces of a dark-colored liquid, smelling strongly of carbolic acid. Having now ascertained what the poison was, the stomach-pump was used, and some olive oil injected. This she soon vomited, together with a little more of the same dark colored fluid. The urine passed was of a dark brown color and gave the usual tests for carbolic acid. The fæces were also of a dark color. With the exception of some soreness of the mouth and throat, together with a little pain in the epigastrium, she recovered without a bad symptom, and on the fifth day after admission was discharged. It was subsequently ascertained that she had taken about one ounce and a half of the common crude carbolic acid.

THE TRACTION SUTURE.—Dr. Oscar H. Allis recommends the following device (*Annals of Anatomy and Surgery*, September, 1883) to obviate the tendency of sutures to cut their way out when there is considerable tension of the skin at the edges of a wound: After drying the skin thoroughly, he applies strips of adhesive plaster passing from the margin of the wound in the direction in which the sutures are to hold. The needle is then passed deeply through both plaster and skin, and before the sutures are tightened, an assistant approximates the margins of the wound by pressure from his hands. Sutures employed in this manner, the writer claims, have a firm hold upon the plaster, exert their traction upon a large surface, are less irritating and harmful,

and will continue an efficient action much longer than the ordinary integument sutures.

LYMPHATIC DISCHARGE FROM THE NOSE IN LEUCOCYTHÆMIA.—Dr. Cornil relates the case of a patient suffering from leucocythæmia who had a discharge from the nose of a thick, transparent, glairy fluid. It flowed slowly but constantly, and was neither thin like the discharge of a commencing coryza nor opaque like that of a more advanced nasal catarrh, but contained a large quantity of white corpuscles. The patient did not sneeze nor were there any tickling sensations in the nose. At the autopsy the mucous membrane of the nasal fossæ was seen to be smooth, without ulceration, but thickened in places. The thickened parts presented a gray color on section. They were formed by an infiltration of the connective tissue with a mucous, transparent fluid, like lymph. It was this leucæmic infiltration of the Schneiderian mucous membrane which was the cause of the nasal lymphorrhœa.—*Revue Médicale*, August 11, 1883.

TREATMENT OF CORNEAL OPACITIES.—Dr. Michel recommends sulphate of cadmium, of the strength of two and one-half grains to the ounce of mucilage, as an application to opacities of the cornea. A camel's-hair brush, dipped in this wash, is applied to the centre of the spot and retained in contact with it for a few seconds. At first the application is made once a day, but after a while is repeated two or three times in the twenty-four hours. When the pain grows less, the strength of the solution may be increased to five grains or even seven grains to the ounce. When the opacity is of recent formation it rapidly disappears under this treatment, but when it is of old date the applications must be long continued.—*Revue Médicale*, August 11, 1883.

THE MORBID ANATOMY OF IODOFORM POISONING.—Dr. A. Hoepff found, post-mortem, in four cases of death from iodoform poisoning a condition of fatty degeneration of the heart, liver, and kidneys. The process was only beginning in some, but far advanced in others. The author then instituted a series of experiments upon rats, guinea-pigs, and rabbits, administering to them subcutaneous injections of iodoform in oily solution. In every case he found parenchymatous inflammation of the heart, liver, and kidneys. These experiments, however, do not serve to explain the peculiar cerebral symptoms observed in man after poisoning by this substance.—*Allgem. Med. Central-Zeitung*, August 8, 1883.

EXTRA-UTERINE PREGNANCY, WITH RETENTION OF THE FŒTUS FOR SEVEN YEARS.—A woman, thirty years of age, during the second month of pregnancy, was suddenly seized with violent pains in the lower part of the abdomen, followed by syncope, cold extremities, and vomiting. These symptoms indicated the commencement of a peritonitis, which lasted for three weeks. The pregnancy then proceeded without any further accident. About two weeks before the expected time the pains of labor began, and recurred with regularity and increasing frequency. Even the os began to dilate. Suddenly, after three days, all the pains ceased, the os closed again, and the patient resumed her ordinary avocations. She experienced a little inconvenience at first from an abundant secretion of milk. Six weeks later menstruation was re-established, and for seven years the courses appeared with perfect regularity, and the woman enjoyed excellent health. At the end of this time another attack of peritonitis confined the patient to her bed for several weeks, during which illness she passed a quantity of hair mixed with the fæces. Five months later she began to pass little bones with her stools, and in the course of three months very nearly a complete fœtal skeleton was thus collected. The bones were perfectly clean of the soft parts. They were in a more advanced stage of ossification than is normal in a child at term. At the time that this case was reported to the Anatomical Society of Paris by Dr. De Brun the woman was in excellent health and still passing one or two perfectly formed bones with each stool.—*Le Progrès Médical*, June 30, 1883.

THE RADICAL OPERATION FOR HERNIA.—From a careful study of upward of four hundred cases, Dr. Leisrink arrives at the following conclusions: 1. The radical operation should never be attempted for the cure of reducible hernia. 2. In the case of very large and painful, or of otherwise incapacitating hernias, the operation is justifiable. 3. Old and feeble persons and very young children should not be exposed to the risks of this operation. 4. The radical operation is indicated after the reduction of strangulated hernia, unless for any reason it be desired to keep the canal open. 5. A radical cure is very seldom obtained; yet (6) the condition of the patient is usually greatly bettered by the operation. 7. In every case a truss should be worn after the operation. 8. The radical operation should always be performed under the most strict antiseptic precautions.—*Deutsche Medicin. Zeitung*, July 26, 1883.

APOPLECTIFORM ATTACKS IN THE COURSE OF LOCOMOTOR ATAXIA.—A man, forty-seven years of age, presenting the symptoms of locomotor ataxia (lightning pains, diplopia, ataxic walk, vesical and rectal disturbances, etc.) suddenly lost the use of his right arm and also the power of speech for the space of ten minutes. Four weeks later similar attacks, involving the entire right side, recurred twenty-two times in twenty-four hours. Each time the power of speech was lost, though the patient was perfectly conscious and could think correctly. Only once was ataxic aphasia (using the wrong words to express well-known objects) observed. A second patient was suffering only from the initial symptoms of tabes dorsalis. This man suddenly lost the power of speech without any paralysis or disturbance of the intellectual functions. In the evening of the same day a second attack occurred, in which consciousness was lost for a period of three-quarters of an hour. Professor Bernhardt states that these attacks were not to be referred to a commencing progressive paralysis with ataxic symptoms, nor were they due to syphilis, heart disease, alcoholism, or any other like condition.—*Deutsche Medicin. Zeitung*, July 26, 1883.

PHOSPHATE OF CODEIA.—Dr. Fronmüller employs the phosphate of codeia for hypodermic injection. He says that it possesses the advantage over the muriate and sulphate of being much more soluble (*Memorabilien*, July 16, 1883). The substance crystallizes in slender four-sided columns, is white in color, and of a bitterish taste, and is soluble in four parts of water. Its action is very like that of morphia, but it is milder, and the symptoms of poisoning (such as great weakness, intense headache, bilious vomiting, etc.), are much less often encountered. It seldom causes local irritation when subcutaneously injected. The dose should be at least double that of morphine. The phosphate of codeia is especially recommended in the case of women and children.

THE PREVENTION OF SEA-SICKNESS.—In a communication addressed to the *British Medical Journal* of August 11, 1883, Dr. J. Henry Bennet claims to have discovered a preventive remedy for sea-sickness in the ingestion of strong coffee. He says that some years ago, while travelling from Paris to London, having some time to spare before the sailing of the steamer, he entered a restaurant and drank two cups of *café noir*. To his astonishment he was not ill at all during an unusually rough passage of the Channel, and he was induced to refer his immunity to the action of the coffee. Subsequent experience confirmed this belief. In order to obtain the desired effect, the coffee should be taken long enough before starting to allow of its absorption. Dr. Bennet has always found this simple remedy of great value in short voyages, but he is unable to say whether its influence would continue for a greater length of time than a few hours.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 22, 1883.

IRREVERENCE AND QUACK ADVERTISEMENTS IN RELIGIOUS JOURNALS.

OUR religious contemporaries, with a few conscientious and commendable exceptions, still persist in their old policy regarding medical advertisements. Indeed, they are adroitly expanding this peculiar line of industry, so as to include the balder and grosser swindling schemes, which promise the guileless reader a phenomenal return on an infinitesimal investment. They should certainly be congratulated on the enterprise which enables them to present in a single copy such multifarious opportunities for the subscriber to refresh his mind, body, and estate. How the editors of these journals have rendered their consciences as elastic as their advertising columns must remain a matter of conjecture.

They can no longer plead ignorance as an excuse, for the expressed opinion of the medical press and the medical profession has been so decided and unanimous, that these gentlemen must know that, as far as the medical nostrums they advertise are concerned, many of them are for disgustingly immoral purposes, and all of them are swindles of the most despicable and pernicious kind. If these gentlemen claim that the papers would not pay without this class of advertisements, they are simply serving "Mammon" for the glory of God. It would be interesting to know to which of the two masters they are more devoted. Most educated people are willing to accord them the benefit of the doubt; but there may very likely be some unsophisticated individuals of a more or less heathen persuasion who would be quite at a loss to decide whether the salvation, whose joyful sound these journals proclaim, is to be considered from a religious or medical point of view. Well may these benighted "innocents" inquire of our editorial Fergusons, "Which is the bust, and which is the pedestal?" What a comfortably adjustable conscience that must be which will not allow a church fair to swell its assets by raffles and dancing, yet permits a journal to increase its income by a more palpable species of immorality. This peculiar kind of piety cannot help but remind us of the familiar anecdote of the grocer deacon and his clerks, which we might appropriately paraphrase to suit the times, and imagine our clerical *confrères* making their rounds through the composing-room somewhat as follows:

"Well, Thomas, have you finished 'Yours for Health?' "Yes, sir."

"And you, Richard, have you set up the Great Indian Secret for the Afflicted?" "Yes, sir."

"Henry, have you completed that Blood Purifier?" "Yes, sir."

"*Then let us have prayers.*"

A short time ago there appeared in one of these medico-religious sheets a report of a prayer-meeting at which the editor was present. In the course of the meeting a young man stated that he had lost his situation because he would not mark goods above their real value. He would not have to sell them, he must merely label them. He preferred to avoid an appearance of evil, and so, though he could ill afford it, resigned. Our brother's remarks thereon were fairly redolent with adulation. Their gist was, "Well done. Take no thought for the future, for the Lord will provide." Ah, friend, you may not label goods falsely, but you advertise them, knowing their labels to be false. The youth at the prayer-meeting would not allow a mote in his eye. Cast the beam out of thine own eye: the Lord will provide. "But you don't indorse your advertisements?" No, we should hope not. But had your young friend said to his worldly employer, "I cannot mark your goods falsely, but if you will label them and give me some printed price lists, I will go on the street and hold a gospel meeting and distribute your lists with my tracts. I will not indorse your cheat, but I will advertise it," would you not have shattered his sophistry, and condemned this act as much as you lauded the other? Alas, sirs, "your actions do belie your words."

Now, brethren, let us follow out your policy a little further. We will suppose, with all reverence, that Christ had delayed his coming until the present century. Would you not deem it a most painful incongruity to see the Epistles of Paul interlarded with patent medicine advertisements? Is not the dignity and responsibility of your trust essentially the same as his? Would you not recoil with horror at the idea of beholding the tablet erected reverently for the loved ones you had lost defiled with the fulsome bait of the sharper and abortionist? Yet, because the tablet takes the form of an obituary notice—a tribute less lasting, perhaps, but surely as tenderly sacred to the bereaved—why is such an insult any less heartless or apparent?

If you are convinced you are justified in allowing these advertisements to appear in your columns, why do you not urge the universal application of your rule of conduct? Any patent medicine firm would print your whole paper if they could monopolize the advertising space. But why stop here? Let all the printing of the Church be done by these firms. If it is right and proper that Sunday-school lessons, hymns, sermons, the Scriptures themselves, should appear in your columns besprinkled with [illegible]medies and vermifuges, [illegible] not everywhere? It is perfectly practicable; try it. [illegible] usefulness of your Boards of Publication, had they only to furnish the copy and not the cash, to the printer! Some people with antiquated notions might feel a little squeamish about using a Hair Restorer Hymnal or a Kidney Cure Testament in their devotions, but your papers are rapidly eradicating such old-fashioned ideas of propriety. Advise your poorly paid ministers to free themselves and their church from debt by alternating the "usual notices" with extracts from your papers at so much per extract. They would

merely proclaim from the pulpit what you give as Sunday reading at home.

Now, you may declare yourselves shocked and term all this an irreverent tirade, if you please. The irreverence is yours, not ours. Your family physician may tell you of a shock from another quarter. We believe there are few men but what revere, or at least respect, religion, pure and undefiled; but any attempt to spread simultaneously the work of the gospel and the work of the world, the flesh, and the devil, can only excite disgust. Can a journal, any more than a "temple," become in any sense a "house of prayer," while its outer court is but a "den of thieves?" Has the progress of the age permeated the Pilgrim's Progress of to-day, or have you forgotten the simple story of the "Prince of Dreamers." We wonder what honest John Bunyan would think of the manner in which these modern pilgrims pass through Vanity Fair, on their way to the Celestial City. Our old friends, Christian and Faithful, when besought by the merchants to buy their wares, put their fingers in their ears, and raised their eyes aloft, crying, "Turn away mine eyes from beholding vanity!" Our esteemed contemporary pilgrims, whilst zealously saying, "We will have none of your wares," add "We have been told your wares are evil and cannot indorse them, but give us of thy lucre, and we will advertise them." Would there were more John Bunyans alive to-day!

A CITY OF MEDICAL SOCIETIES.

During the month of October the medical work of societies in this city begins. We give below a calendar showing the extent to which this work has now developed. There are registered in New York City altogether twenty-seven working medical societies, besides two societies devoted to public health, one to general science, one to microscopy, and two to veterinary medicine. There are also four alumni associations, one of which is very active in encouraging medical work.

A large number, indeed the majority, of the societies mentioned below are limited in membership, and hold their meetings at the houses of the members. Their objects are the promotion of friendly intercourse as well as of medical science.

The medical societies of this city have nearly all been the growth of the last twenty years. Of those now organized, not half a dozen existed previous to 1860. Between 1863 and 1870 ten societies, now existing, were organized, and in the succeeding decade nearly as many more.

While some of these local societies are weak and inactive, this cannot be said of the great majority, and the general effect of the existence of the numerous organizations has been most excellent. In no city can there be found so many physicians who are on such amicable terms with each other, nor does any other city produce so many contributions to medical science.

October 1st.—Medico-Chirurgical Society of German Physicians; Morrisania Medical Society. October 2d.—New York Obstetrical Society; New York Neurological Society. October 3d.—Medico-Legal Society. October 4th.—New York Academy of Medicine. October 5th.—Practitioners' Society. October 8th.—New York Ophthalmological Society. October 9th.—East River Medical Association; New York Surgical Society. October 10th.—Pathological Society; Society of Medical Jurisprudence and State Medicine. October 11th.—Harlem Medical Association; New York Laryngological Society. October 12th.—Yorkville Medical Association. October 13th.—Medical and Surgical. October 15th.—Medico-Chirurgical Society of German Physicians. October 16th.—Medical Section Academy of Medicine; New York Obstetrical Society (Private). October 17th.—Northwestern Medical and Surgical Society. October 18th.—New York Academy of Medicine. October 19th.—Roman Medical Society. October 22d.—New York County Medical Society. October 23d.—New York Dermatological; New York Surgical Society. October 24th.—Pathological Society. October 25th.—Obstetrical Section Academy of Medicine; Harlem Medical Association; Clinical Society. October 26th.—Yorkville Medical Association; New York Society of German Physicians. October 27th.—Medical and Surgical Society.

BOVINE VIRUS AND COMMERCIAL ENTERPRISE.

Some of our Western countrymen have been quick to appreciate the fact that there is money in the bovine virus business if conducted in a certain manner. The *St. Louis Medical and Surgical Journal* states that a firm was organized in September, 1882, for the purpose of supplying "pure bovine virus." In March, 1883, there being considerable small-pox in the city, the Board of Health awarded to this company the contract for supplying the virus. During three weeks over ten thousand vaccinations were made, but without a single perfect success! The contract was at once annulled, but it is evident that if there had been an active epidemic, the consequences would have been most serious. It was afterward learned that the vaccine farm was under the direction of a dry goods merchant!

The lesson is obvious. There is a temptation to make a purely commercial venture of the preparation of bovine virus. The increasing popularity of this form of virus in the United States makes it doubly important that great care should be taken by physicians and health boards to know about the methods of its preparation.

THE LEPROSY COLONY IN TRACADIE.

Leprosy is a disease but seldom met with in this country, and the cases seen from time to time in some of our large hospitals are too few in number to furnish sufficient data upon which to base any conclusions as to the origin and mode of propagation of the malady. It is said to prevail to a considerable extent in some of the Scandinavian colonies in Wisconsin; but in Tracadie, a small parish on the Gulf coast at the mouth of the Miramichi River, in New Brunswick, it has existed for upward of sixty years. An interesting account of this settlement, and of the lepers' hospital there situated, was published in the *Catholic World* of May, 1877. The writer was not a physician, and his observations possessed more of a social and religious than of a medical interest. Other notices of a similar character have been published since

then in various periodicals, but none of them has added much to our knowledge of the etiology of the disease. A correspondent who visited Tracadie during the past summer sends us a report of what he learned there concerning the origin of the disease in that settlement, from which we take the following condensed account:

The first settlers in Tracadie were the Le Bretons, who went there about the year 1778. They lived with the Indians, upon the coarsest and most meagre fare, and suffered great hardships, yet none of that name has ever had leprosy. The scourge first appeared in 1820 in the person of Ursula Landry, who, with her sister Isabel, came to Tracadie in 1798. They married two brothers by the name of Benoit. Popular tradition says that Ursula contracted the disease by washing the clothes of some French sailors, who were lepers, some time before she came to Tracadie. This explanation of the origin of leprosy in the colony is, however, far from satisfactory, as it is hardly to be supposed that twenty-two years could have elapsed after exposure to contagion before the disease should manifest itself. Ursula died in 1828. The second victim was her sister Isabel, and the third was François Sonier. This man affirmed that he contracted the disease by carrying Ursula's coffin, the sharp edge of which cut his shoulder, and then inoculation was effected by matter running from the corpse. François Sonier was ill a number of years, and his father's house was the rendezvous for the young people of the neighborhood. Several of these were afterward attacked with leprosy. François attempted once to go to Cape Breton to consult some person there who had quite a reputation for curing ulcers, and on the way stopped at the house of one Savoy. A member of the family, Mary Savoy, washed the clothes of the bed in which he had slept, and afterward herself contracted the disease. It was not until a number of persons who were intimate with the Soniers had contracted leprosy that public attention was drawn to it. Then the lazaretto on Sheldrake Island was established (1844).

There are at present twenty-four patients in the hospital, all coming from within a radius of twenty-five miles from Tracadie. From a study of the records, which have been carefully kept since the nuns took charge in 1868, it is seen that the average stay in the hospital was five years. If to this is added two or three years as the duration of the disease prior to the entrance of the patient into the lazaretto, we have an average duration of leprosy of seven or eight years. One patient, however, has been in the hospital for twenty-four years, and another for fourteen. So it would appear that the course of the disease is very variable as regards time.

Our correspondent spent a great part of his time in studying the mode of origin of the leprosy in this place. There are four possible ways, he states, in which the origin and spread of the disease may be accounted for, viz., heredity, endemic influences, contagion, and heredity and contagion combined. Although the general opinion of writers on leprosy is that it is propagated by hereditary influences, yet in no case reported in Tracadie can this be satisfactorily proved. In every instance there was abundant opportunity for contagion, so that the part played by heredity alone could not be determined. The theory of endemic origin is disproved by the fact that the same conditions of race, habits, mode of living, etc., exist in other places along the coast where leprosy is unknown. The theory of the spread of the disease by contagion is supported by many incontestable facts. Peter Noel came from a perfectly healthy family. He slept during one summer with a man in the advanced stages of leprosy, and in a few years became himself a victim of the disease. A man by the name of McComb, living in a settlement some fifty miles distant, where leprosy was unknown, came to Tracadie and worked for some time in a lumber camp. He returned home a leper, and died. James McGrath caught the disease from Michael Gould. Peter McGrath slept with James, became leprous and died. Peter lived for a time with the Drysdale family. Seven of Drysdale's children fell victims to the malady. It is a matter of common observation that unless the patients are early removed to the lazaretto, others of the family are attacked; and again, if the sufferers remain at home, but strictly isolated from the rest of the family, the disease is less liable to spread. Finally, it is impossible to account for the rapid propagation of the leprosy in families previously healthy, except on the theory of contagion. On the other hand, facts are not wanting which seem to oppose this presumption. Women have been employed in the hospital for years, washing the clothes of the lepers and scrubbing the floors of the wards, yet they have never themselves become leprous. Neither the Sisters nor the medical attendant have contracted the disease. The case of one man is related who had lost three wives in succession from leprosy, yet he escaped. Other instances are on record of children, born in the lazaretto of leprous mothers, and growing up within its walls, who have remained healthy. But these negative facts, however numerous, have much less weight than a few positive ones. Of a number of persons exposed to any contagious disease not every one is attacked. The attendants in the hospital, furthermore, observe every precaution, exposing themselves as little as possible to direct contact with the patients, and living in light and well-ventilated apartments away from the wards.

The following are the conclusions arrived at by the correspondent from his observations of the leprosy as it exists in Tracadie: 1. The origin and early spread of the disease cannot be explained on the theory of hereditary transmission, although this theory may in part account for its further propagation. 2. Although endemic influences, such as climate, mode of life, diet, etc., may be strong predisposing elements, they are in no case the sole cause of the disease. 3. Leprosy in Tracadie was imported from without, and, finding there favorable conditions, was propagated from one person to another by contagion. Finally, leprosy may be regarded as one of the least contagious of diseases, and one which will only spread under a combination of favoring circumstances such as were found in Tracadie.

The lazaretto is clean and kept in perfect order, and everything is done by the Sisters to ameliorate the sad lot of the inmates; but the building is gloomy at the best, and resembles more a prison than a hospital, and it would be a great boon to the suffering patients could a new and more commodious structure be erected. The writer speaks in most grateful terms of the courtesy

shown him while in Tracadie, and desires to acknowledge his indebtedness to Dr. Smith, the Rev. Father Babineau, the Rev. Mother St. John, and Mr. Young, for much valuable assistance rendered him in his study of the disease. The value and importance of the work done in this humble way in an obscure and wretched village on the shores of the Gulf of St. Lawrence, cannot be over-estimated. To the untiring vigilance of the physician and the nuns in searching out and sequestrating every new case of leprosy occurring in the village is doubtless due the fact that it has not ere this spread to other and distant places. For admitting the contagiousness, in however slight degree, of the disease, there are numbers of fishing villages all along our coast in which the condition of the inhabitants would seem to invite its approach, and once it had gained a foothold we would have Tracadies enough at home, and there would be no occasion to go abroad to study the leprosy. There is now good cause for the hope that the disease may eventually be stamped out in New Brunswick, and thus a danger, slight, but none the less real, to ourselves will be removed.

THE HIGH TEMPERATURE OF FEVERS.

THE opinion has been current for some time that the essentials of fever, such as increased pulse-rate, disturbance of the cerebral functions, and, later, certain parenchymatous degenerations, were the direct consequences of increased bodily heat. This widely accepted doctrine is now opposed by Dr. Unverricht. He says that although these so-called febrile symptoms are generally found associated with an elevated temperature, they are not therefore necessarily caused by it. Different kinds of fever are accompanied by varying degrees of cerebral manifestations. Thus a temperature of 103.5° in septic poisoning is associated with great depression of the nervous system. In relapsing fever, on the other hand, a patient bears easily 107° or more. The author cites numerous accurately observed cases to prove that a temperature of over 108° is not of itself fatal. He does not regard Litten's experiments in proof of the evil effects of high temperatures as conclusive, and opposes to them the observations of Volkmann, which go to show that high fever in aseptic conditions may be unattended with danger. Since, therefore, this point is still unsettled, Dr. Unverricht thinks that in the treatment of fevers the question should always be considered whether the harmful effects produced in greater or less degree by all febrifuge remedies will not outweigh the advantage hoped for in reducing the temperature. In fact, he thinks that in certain instances fever may be regarded as a process tending to the advantage of the organism. There is little doubt that since the introduction of exact thermometry into medicine, temperature variations have received a rather undue amount of attention. It is so easy and simple a matter to detect pyrexia and at once prescribe a febrifuge. Pulse observations and other valuable indications have been correspondingly neglected since the thermometer began to assert its claims. But while this much may be readily conceded, we are certainly not prepared to fully endorse Unverricht's opinions. In the ordinary run of febrile affections a high temperature must still be regarded as a symptom significant of danger. And even if the severity of the individual case need not be gauged by the thermometer alone, the wary practitioner well knows and appreciates the meaning of excessive pyrexia. It is nature's warning that damage, if not already done, may be confidently expected. And from a therapeutical point of view it is quite clear that to be thus forewarned is, in a measure at least, to be forearmed. Expectancy, which is but a misnomer for helpless inaction, is therefore to be deprecated in all such conditions. And we must emphatically oppose the view which sees in fever nature's effort at restitution, and not a morbid process with destructive tendencies.

CARDIAC VERTIGO AND ANGINA PECTORIS.

SYMPTOMATIC, or cardiac vertigo, is an affection which, according to Germain Sée, is not uncommon in cardiac affections, being more frequent in aortic insufficiency, is so common, in fact, that when vertigo occurs in the course of heart disease we need, as a rule, look no farther for its cause. This fact suggests also that in cases of obstinate and distressing vertigo the heart should always be examined, especially if extreme pallor, a prominent symptom of aortic insufficiency, be present and will not yield to medication. In these cases M. Sée affirms that iron is absolutely indicated, though in many cases, on the contrary, iodide of potassium is indicated and gives excellent results. In these cases there are also observed the characteristic pains of angina pectoris coming on every few months, another prominent, though not constant, symptom of aortic incompetence. The anginous pains should of course be combated by hypodermics of morphine, the administration of chloral, or inhalations of nitrite of amyl during the access, and by bromide of potassium and digitalis, or convallaria, during the intervals.

It is interesting in this connection to notice the conclusions of W. Allen Sturge (*Brain*, October, 1882), regarding the etiology of angina pectoris. Having selected a typical case and minutely detailed each symptom as given by the patient, he concludes that the local attack on the heart is due to an organic modification in the substance of the cardiac muscle itself, or some change in the heart acting on the terminal filaments of the cardiac nerves; a commotion spontaneously developed in the gray substance of the sympathetic ganglia of the cardiac plexus, this being transmitted to the spinal cord and brain; a commotion spontaneously developed in the cervical sympathetic ganglia, which give off branches to the cardiac plexus, or in the ganglia of the vagus; a spontaneous commotion in the part of the gray substance of the cerebrum, which may receive impulses coming from above and below; a spontaneous commotion in the parts of the gray substance of the cord in communication with these ganglia by means of bands of nervous substance passing from the cord to the great sympathetic.

Of course a great number of observations are necessary in order to place these scarcely more than theoretical causes on the sound footing of etiological fact. This is recognized by the author, but he is of the opinion—in which most authorities concur—that in the greater number of cases of angina pectoris associated with organic

lesions of the heart or great vessels, the primary irritation probably takes place at the periphery of the cardiac nerves. Dr. Sturge admits, however, that there are cases of angina pectoris which are due to spontaneous lesions of the nerve-centres. Trousseau long ago pointed out the relation between angina pectoris and epilepsy. The paper, though far from conclusive, as the author admits, gives evidence of careful observation, and is an important contribution to our knowledge of this affection.

THE GASTRIC ULCER AND ITS RELATION TO CANCER OF THE STOMACH.

Despite considerable study and numerous experiments, our knowledge of the origin of gastric ulcer is still far from satisfactory. Cohnheim, indeed, succeeded in causing an ulceration of the mucous membrane of the stomach by artificially produced embolism and thrombosis of minute gastric vessels. These sores had the form of the typical ulcer of the stomach, but were not chronic and slow of healing as the latter commonly is. Other questions of interest, and, as yet, unsolved, are the mode of cicatrization of the ulcer and the relation, if relation there be, between chronic ulcer and carcinoma of the stomach.

In a brochure, recently published in Leipzig, Dr. Gustav Hauser endeavors, through eighty octavo pages and with the aid of seven plates, to clear up the mystery, and to demonstrate satisfactorily the processes of destruction and repair of gastric ulcer and the subsequent development of cancer. He attributes ulceration of the mucous membrane to an infarction caused by permanent obstruction to the circulation in the fine arterial twigs passing from the submucous to the mucous layers of the stomach. This obstruction may arise from the lodgement of an embolus, from thrombosis or from the rupture of one of these arterioles. The resulting ulcer is chronic only when there is actual disease of the blood-vessels occurring prior to, or at the same time with the infarction. For then the formation of new vessels necessary to the healing process becomes impossible. The more or less chronic course is directly dependent upon the severity of the disease in the vessels. The size of the ulcer is in proportion to the extent of infarction and also to the number of arterioles affected. Any disease of the arteries may give rise to this condition, but atheroma and fatty degeneration seem to play the most important rôle, at least in advanced age. The healing process begins by a sort of puckering together of the base of the ulcer, by which the edges are approximated and close adhesions formed between the mucous membrane and the parts lying beneath it. If the ulcer is extensive, with its base formed of a neighboring organ adherent to the stomach, the cicatrization is not complete, but the mucous edge becomes fixed to the muscular layer or to a greatly thickened connective tissue. This process, the author states, is attended with an enormous hypertrophy and proliferation of the glands immediately about the ulcer. At the same time the normal glandular epithelium becomes transformed into cylindrical epithelium. The hypertrophy of the glands is due to the increased supply of blood during the process of cicatrization, aided by the diminished resistance of the surrounding connective tissue. The glands are excited to increased action, and at the same time the physiological resistance of the supporting connective tissue is wanting. Regarding the development of cancer in the cicatrix of an old gastric ulcer, the author asserts that such a process may take place. Large ulcers, which never become entirely cicatrized, are especially prone to cancerous degeneration. The disease, he says, begins in the lumina of the glands at the edge of the ulcers which have undergone the changes described above. The abnormal growth of the glandular epithelium continues and finally takes on a malignant character. Between a cancerous growth of the glandular epithelium and an abnormal hypertrophy of the same there is a difference only of degree. In either case, says Dr. Hauser, the causal conditions are the same, viz.: an irritability of the secreting epithelial cells, due to the increased flow of nutrient material, and a diminished resistance of the supporting connective tissue. He relates the history of a case upon which he bases his belief that carcinoma of the stomach may arise from disease of the peptic glands independently of any embryonic germ. As confirmatory of Dr. Hauser's view of chronic ulcer being dependent upon disease of the vessels, may be mentioned two cases related by Dr. Mattei (*Deutsche Medizinal-Zeitung*, July 5, 1883). No sufficient cause could be determined during life for the formation of the ulcers. At the autopsy there was found an amyloid degeneration of the liver and spleen, and a similar change in the gastric vessels had given rise to the ulceration.

News of the Week.

Pasteur's Investigation of the Cholera in Egypt.—The scientific mission to Egypt to investigate the cholera epidemic, for which a grant of 50,000 fr. has just been obtained by M. Pasteur from the French Chambers, consists of MM. Roux, Thuillier, Straus, and Nocard. M. Pasteur has formulated a set of rules for the guidance of his party, by means of which he hopes to guard against infection. All articles of food and drink must be boiled and then kept in heated vessels. Fruit must be washed in boiled water before being eaten. A two-per cent. solution of carbolic acid is to be used for washing purposes.

Increase of the Paris Hospitals.—The Municipal Council has voted three million francs to be expended in increasing the hospital efficiency of the city. Two millions are to be expended upon the large hospitals already existing. One million constitutes the first instalment for the erection of a hospital for contagious diseases, one for chronic diseases, and one for juvenile incurables.

The International Hygienic Exhibition at Berlin has closed, but it has been decided to establish a permanent Museum of Hygiene in that city.

Another New Medical College.—The Medical Department of Niagara University is the title of a new medical college recently organized in Buffalo, N. Y. It requires attendance upon a three years' graded course, and aims to exemplify the higher education. Judging from the announcement, not much is exacted in the way of preliminary education, although something is required.

PROFESSOR GERHARD LEOPOLD, of Leipzig, has been called to fill the vacancy as Professor and Director of the Royal Institute for Midwives at Dresden.

A NEW BUILDING FOR THE NEW YORK CITY HEALTH BOARD.—A movement is on foot to secure a new and separate building for the City Health Department.

MEDICAL SCHOOL OF HARVARD UNIVERSITY—ONE HUNDREDTH ANNIVERSARY.—The celebration of the one hundredth anniversary of the establishment of the Medical School of Harvard University, and dedication of its new building, will take place on October 17, 1883. The following is the programme: Part I. (At the Massachusetts Institute of Technology, Huntington Hall, at 11 o'clock A.M.): Address by the President of the University; Oration by Emeritus Professor Oliver Wendell Holmes; Presentation of a portrait of Professor Holmes and a bust of Professor Henry J. Bigelow. Part II. (At the Medical College, Boylston Street): Prayer by Rev. A. P. Peabody, D.D.; Dedication of the new building to the purposes of medical instruction; Reception of subscribers to the building fund, and invited guests, by the Medical Faculty; Exhibition of the building.

DEATH OF DR. F. A. PICKETT, OF REDFORD, N. Y.—Dr. F. A. Pickett died on the morning of the 6th inst., after an illness of three weeks with typhoid fever. He graduated at the University of New York City in 1879, when twenty-four years of age, after which he removed to Redford, N. Y., where he practised until his death. He left a large and lucrative business by his sad and untimely death.

PRIZES FOR NEW REMEDIES IN TYPHOID FEVER.—Acting Assistant J. M. Main, of the Marine Hospital Service, reports from Brownsville, Texas: "The Medical School of the city of Mexico has called a convention of physicians to determine the properties and uses of simaba cedroni—its pharmacology, chemical analysis, and physiological action—demonstrated by experiment, with a view of ascertaining its usefulness in the treatment of typhoid fever. A prize of $500 is offered for the best thesis on the subject; also a premium of $500 for the best thesis on the usefulness of pulque in typhoid fever. Pulque is a refreshing beer from the heart of the maguey (*Agave Mexicana*). The President of the republic has appointed a sanitary commission which is to meet first at Vera Cruz during the present month. Its object is to consider and discuss questions of hygiene, disinfection, and prophylaxis."

YELLOW FEVER.—At Vera Cruz there were nineteen deaths from yellow fever during the ten days from August 20th to 30th.

No case of yellow fever has appeared in the city of Pensacola, the disease having been confined to the Naval Reservation.

Acting Assistant Surgeon J. M. Main reports, under date of September 3d: "Yellow fever has broken out at Tlacotalpan, and is spreading in a northerly direction. It has not reached Tuxpam. Tuxpam has enforced quarantine against all infected ports and inland cities. Typhus fever has appeared recently at Zacatecas. The death-rate is said to be ninety per cent. Small-pox is very fatal at Progreso; mortality 52.5 per cent. Yellow fever has appeared at Campeachy, carried there by a Norwegian vessel. At Real del Monte typhus fever is prevailing, mortality being ninety per cent."

Sanitary Inspector Daniel M. Burgess, of the Marine Hospital Service, reports from Havana: "There were 708 deaths in this city during the month of August. Of the decedents 152 were by yellow fever, 19 by typhoid fever, 3 by bilious fever, 23 by intermittent, remittent, and pernicious fevers, and 1 by diphtheria. During the week ending September 7th there were 18 deaths by yellow fever, nearly all of them being among private citizens. The reduction in the mortality by yellow fever is not from any tendency in the disease to cease to spread, but from the want of material for it to feed upon, and the mild type of the epidemic or endemic. Some wharves are very dangerously infected, and all vessels which go to them and stay over three days are almost sure to suffer and become dangerously contaminated. Within the last two weeks whole crews of vessels laying at those wharves (liable to have yellow fever) have either had it while the vessel was there or soon after leaving. The navy and army have suffered very much, and the few remaining ones who have not had it continue to fall sick."

DEATH OF LOUISE LATEAU.—The death is announced of Louise Lateau, the Belgian stigmatisée, of Bois d'Haine. She was thirty-three years and seven months of age at the time of her death. Her case excited considerable interest at one time, and she was subjected to numerous medical investigations. Virchow, it is said, was asked to see her, but was unable to do so. On every Friday, it was said, she fell into a state of ecstasy, and blood flowed from the stigmata in her hands and feet.

DR. LOUIS F. PELTON, of Mount Kisco, died on Monday, leaving a widow and two sons. He was graduated from the New York University Medical College, in 1847.

AN UNPLEASANT EXPERIENCE.—Dr. William E. Beardsley, of Brooklyn, was recently called to attend a woman who was suffering from dyspnœa. He administered some aromatic spirits of ammonia, and, no relief ensuing, was about to repeat the dose, when the patient fell back dead in his arms. The husband, crazed with grief, rushed upon the doctor exclaiming, "Did I call you here to murder my wife?" and proceeded to do his best to murder the doctor. The man was a stout German, and Dr. Beardsley was considerably bruised in the encounter, and might have received very serious injuries had it not been for the timely intervention of others in the house.

THE LATE DR. J. D. TRASK, OF ASTORIA, N. Y.—It is seldom that the death of a physician is looked upon as a public affliction by the community in which he has labored. So it was, however, in the case of the late lamented Dr. Trask. The rich and poor crowded the church to pay their last tribute of respect to one who had served them so faithfully during life. The stream of mourners continued to file past the casket until long after dark, and even after the congregation had left the church many came to bid farewell to the dead who had been unable to attend the funeral services earlier in the day.

The scene throughout was one provocative of many sad reflections. There was an intensity about the grief of those present that is very rarely witnessed. The several departments of the City Government, the Citizens' Committee of Fifty, the Law and Order Society, and various other bodies were represented, besides which several distinguished members of the medical profession from New York City and other parts of the State were present. The big bell of the Church of the Redeemer and the fire bell were tolled at minute intervals during the afternoon and up to the time of the commencement of the service. As an author, practitioner, citizen, and Christian he did his work effectively, quietly, conscientiously, and for the work's sake. It would be well if such could be said of all of us.

AMERICAN ACADEMY OF MEDICINE.—The annual meeting of the Academy will be held at the New York Academy of Medicine, 12 West Thirty-first Street, New York, on Tuesday, October 9 (three o'clock P.M.), and Wednesday, October 10, 1883.—RICHARD J. DUNGLISON, Secretary.

A GOLD MEDAL TO W. H. SCHIEFFELIN & CO., OF NEW YORK.—Among the awards announced to exhibitors at the Holland International Exhibition at Amsterdam was a *gold medal* to Messrs. W. H. Schieffelin & Co. for their soluble pills and granules. This is a special distinction for their reliable preparations, as the award was made after a careful analysis of specimens of Messrs. Schieffelin's manufactures by the Government chemists.

THE ASSOCIATION OF GERMAN PHYSICIANS AND NATURALISTS held its fifty-sixth annual session at Freiburg, beginning September 17th.

COPPER AND CHOLERA.—M. Bailly, of Chambly, has adduced evidence that copper is not a prophylactic against cholera as asserted by M. Burq. An experience of sixteen years in connection with a factory where workmen are largely employed in copper has shown that the *employees* are not exempt from cholera, typhoid fever, or other infectious disease.

SLIGHTLY PREMATURE.—The Chicago police have certainly not been carefully instructed in the signs and tokens of death, as the following incident will show: A man named Lewis Lacy entered a street-car in that city a few days since in a drunken condition and refused to pay his fare. The conductor threw him off the platform, and seeing he did not move, told the driver to whip up, and the car rattled away and the conductor escaped. The police patrol was called, the body was put in a wagon, taken to the morgue, and placed on ice, while a large force of police were sent in search of the fleeing conductor. After being a short time on ice the body began to show signs of life, and in the course of half an hour Lacy was able to walk to the police-station. An examination showed he was not seriously hurt, and that his state of temporary coma was due wholly to liquor.

DEATH OF DR. SYLVESTER F. MIXER.—Dr. S. F. Mixer, of Buffalo died on September 17th. Dr. Mixer was born in Morrisville, Madison County, N. Y., December 27, 1815. He graduated from the Medical Department of Yale College when twenty-six years of age, and immediately began the practice of his profession in Buffalo. Six years later he took the degree of M.D. from the College of Physicians and Surgeons in this city. He was a prominent member of the Buffalo and Erie County Medical Societies, and the American Medical Association. From 1858 to 1874 Dr. Mixer was Attending Physician to the Buffalo City Hospital. He then became Consulting Physician to the same institution.

PROFESSOR MÜNCH, of Kiew, has been ordered to Egypt to study the cholera.

PROFESSOR BIZZOZERO has received the Riberi Prize of 20,000 francs for his investigations into the physiology and pathology of the blood.

YELLOW FEVER has appeared at Guaymas, Mexico.

THE FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE—MEDICAL SECTION.—We reported some of the work of this meeting in the last issue of THE RECORD. At the meeting, August 20th, M. Burot made a communication upon the "Variations of the Chlorides in the Urine." He showed an apparatus for the easy and rapid quantitative measurement of these chlorides. It consisted of a graduated tube and pipette, a solution of nitrate of silver (28.40 grammes per litre), and a solution of chromate of potassium. M. Onimus sent a communication upon a case of "Infantile Pseudo-paralytic Contracture." The patient had in all the extremities muscular tension, exaggerated reflexes, and contractures. All the members could be moved, but the effort was attended with ataxic chorea-like movements. No atrophy was present. Onimus referred the lesion to the upper part of the pons. M. Apostoli read a paper upon the "Electrical Treatment of the Ovarian Pain in Hysterics." M. Boucheron opened a discussion upon "The Pathogeny of Retinal Detachment." He referred especially to the rheumatic theory of its origin. M. Bouchut called attention to the "Relation between Intercostal Neuralgias and Angina Pectoris." He related the history of three patients suffering from intercostal neuralgia who were suddenly seized with angina pectoris. Other instances illustrating this transfer of morbific action were given. M. Verneuil presented a learned but not particularly instructive paper upon "Traumatic Auto-invenlation." M. Nepven read a paper in which he claimed that micrococci were always present in the fluid of the peritoneal sac in strangulated hernias. Antisepsis should be applied accordingly. M. Leudet read a paper upon "Ulnar Neuritis caused by Repeated Contusions in following Certain Occupations." Carpenters, in planing, dyers, calico-printers, and shoemakers were especially liable to this trouble. M. Maurel read a paper upon "Normal and Pathological Albuminuria." He presented a somewhat original division of the albuminous fluids of the body. They are, he said, of two kinds: Those which are colored violet, and those which are not so colored by a solution of copper sulphate in potassa. In the latter class are the albumens passed in the urine during the acute fevers. In pathological albuminuria, or Bright's disease, the albumen passed is colored violet by the solution referred to.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, Pa. September 18, 19, and 20, 1883.

TUESDAY SEPTEMBER 18TH—FIRST DAY—MORNING SESSION.

THE Society met at the College of Physicians and was called to order at 10 o'clock by the President, DR. GILMAN KIMBALL, of Lowell, Mass.

MEMBERS PRESENT.

The following answered to the calling of the roll by Dr. Frank P. Foster, of New York, Secretary: Drs. Kimball, of Lowell; A. H. Smith and Parvin, of Philadelphia; Barker, Polk, and Emmet, of New York; Mann, of Buffalo; Johnson, of Washington; Wilson and Howard of Baltimore; Reeve, of Dayton, O.; Ingham, of Philadelphia; Jackson, of Chicago; Reamy, of Cincinnati; Van de Warker, of Syracuse, N. Y.; Campbell, of Augusta, Ga.; Byrne, of Brooklyn; Duer, of Philadelphia; Byford, of Chicago; Palmer, of Cincinnati; Sutton, of Pittsburg; Battey, of Georgia; Chadwick and Lyman, of Boston; Goodell, of Philadelphia; Gillette, of New York; Browne, of Baltimore; Reynolds, and Baker, of Boston; E. Wilson, of Philadelphia.

The address of welcome was delivered by DR. EDWARD DUER, of Philadelphia.

INVITED GUESTS.

The Council recommended the following: Alfred Stillè, M.D., President Philadelphia College of Physicians; William M. Welch M.D., President Philadelphia County Medical Society; Richard A. Cleeman, M.D., President Philadelphia Obstetrical Society; James Tyson, M.D., President Philadelphia Pathological Society; Robert P. Harris, M.D., of Philadelphia; I. R. Page, M.D., and Robert T. Wilson, M.D., of Baltimore.

The first paper was read by DR. JOSEPH TABER JOHNSON, of Washington, D. C., on

SUPERINVOLUTION OF THE UTERUS.

Sir James Simpson described this disease over thirty years ago, and stated that his patients remained fully uncured. Dr. Johnson introduced the subject, with the hope that discussion might follow which would throw light upon a hitherto obscure class of cases. Barnes believes that this condition is uncommon. One writer has found it to occur in about one per cent. of all cases. Dr. Cole, of San Francisco, has seen many of these cases, It must be differentiated from atresia of the uterus. Simpson claims that it may occur in the same connection as undeveloped uterus and other processes not involving an inflammatory process. The extent may vary from the slightest shortening to entire obliteration of the uterus and ovaries, as has been reported by Whitehead. The term implies that superinvolution only occurs after the process of involution has been set in progress by the emptying of a uterus once occupied by some mass or body which has produced its increase in size beyond the normal point, as, for instance, after cases of hydrometria, pyrometria, hydatids, or removal of the ovaries, uterine tumors, as well as upon the conclusion of utero-gestation or abortion.

Dr. Johnson then related the history of four cases occurring in his own practice, and concluded with a brief summary of the literature of the subject, so far as he was familiar with it. The points on which all writers on this subject agree are that excessive involution does occur from some cause; that electricity should be tried; and that in the great majority of cases it is incurable.

DR. BARKER, of New York, suggested, with regard to the term superinvolution, that it might with propriety be used in all cases where retrograde process has taken place to an extreme extent from any cause, as fibroids, acute uterine catarrh, etc. With regard to frequency, he thought it a difficult point to decide, but, for himself, was inclined to the opinion that it occurred quite as frequently as indicated by the author of the paper. In the large majority of cases no benefit can be given by treatment. One practical point was not referred to by any writer, so far as he had seen, and that was with reference to the class of cases which could be benefitted by treatment. Whenever he found superinvolution of the uterus associated with evidence of arrest or defective ovulation, very little could be effected by treatment. On the other hand, cases associated by evidence of any active ovulation, he thought could be cured sometimes, and the proof had been in the fact that the symptoms had disappeared, pregnancy ensued, etc. The symptoms which gave evidence of the existence of ovulation, associated with this condition of the uterus, were disturbances of the vascular and nervous systems at or near the menstrual period, such as intense headaches, flushing of the face and congestion of the eyes, pelvic pain, and sense of dragging, with nausea and vomiting, etc. The point he made was that superinvolution associated with functional activity of the ovaries might be benefitted by treatment. Galvanism was one of the prominent agents which he had employed.

DR. REEVES JACKSON, of Chicago, thought the question of differential diagnosis between superinvolution and the occurrence of premature climacteric was a difficult one to decide in some cases, and cited the history of a case. Whether or not the condition is one originating in the uterus was regarded by him as a question of great practical importance. If there is functional activity in the ovaries it may be assumed that the small size of the uterus does not depend upon disturbances of its own vascular and nervous supply, primarily.

DR. VAN DE WARKER, of Syracuse, thought the cases might be divided into those which show the cervix only involved and those in which the condition affected the body of the uterus as well. There are cases in which involution is confined to the cervix, the proof of which, can be found in certain cases of laceration of the cervix when the posterior lip is very much atrophied and the anterior lip in very nearly its normal condition. He thought Dr. Johnson's first case was one of that character.

DR. H. P. C. WILSON, of Baltimore, thought it exceedingly rare to meet with the condition described in the paper by Dr. Johnson. He was able to recall only two or three cases of superinvolution in women who have borne children, or had miscarriages or premature labors. He thought that in the cases in which the ovaries existed in the normal, or nearly normal condition, and were normally active, benefit might follow treatment.

DR. BATTEY, of Rome, Ga., said that in the majority of cases in which he had performed the operation with which his name had been associated, superinvolution of the uterus had followed, and in quite a number of cases it had been extreme. In many of the cases the uterus was apparently healthy at the time of the operation. He thought the question of superinvolution was one affecting the ovaries rather than the uterus; it is want of proper ovulation.

The discussion was continued by Dr. Byford, of Chicago, Dr. Campbell, of Georgia, and closed by Dr. Johnson.

THE IMPORTANCE OF CLEANLINESS IN SURGICAL OPERATIONS.

DR. R. STANSBURY SUTTON, of Pittsburg, Pa., read a paper on the above subject, in which he gave a review of ideas and theories entertained from time to time since Galen taught down to the present, concerning the real na-

ture and treatment of this important class of cases. The germ-theory received a large share of attention, coupled, and justly so, with the name and method of Mr. Lister. The conclusion reached by the author was that the best success in the treatment of surgical wounds came chiefly from cleanliness rather than from the use of antiseptics, technically speaking. Special personal attention must be paid by the surgeon to all the details, regulation and preparation of assistants and nurses, preparation of instruments and ligatures, exclusion of sponges, etc.

Dr. S. D. Gross, of Philadelphia, was invited to open the discussion. He thanked the Society for the compliment extended, but declined, for the reason that he came to listen and to be instructed.

Dr. Lusk, of New York, thought that for the greatest number of operations the spray could be used with positive advantage, and cited four cases, all complicated, in which he operated in Bellevue Hospital with satisfactory results under unfavorable circumstances.

Dr. Wilson favored the use of spray to render the air of the operating-room antiseptic, but did not continue it during the performance of the operation.

Dr. Campbell, of Augusta, Ga., referred to surgery as practised in the days before the antiseptic method was brought forward, and he was of the opinion that, all in all, about as good results were obtained then as now. Cleanliness was observed then and care in the performance of the operations.

The discussion was closed by Dr. Sutton, after which the Society adjourned to meet at 3 P.M.

First Day—Afternoon Session.

The Society was called to order by the President.

Drs. R. B. Maury, of Memphis, Tenn.; Wm. E. Moseley and Wm. P. Chunn, of Baltimore; and Samuel D. Gross, of Philadelphia, were elected

INVITED GUESTS.

Dr. Albert H. Smith, of Philadelphia, then read a paper on

HOT WATER IN SECONDARY HEMORRHAGE AFTER PELVIC OPERATIONS,

in which he stated that while the general value of this agent had been recognized since attention was first especially directed to it by Dr. Emmet, of New York, who gave Dr. Pilcher, of Detroit, credit for the original suggestion, and while it received constant employment in the larger cities, he had been impressed with the idea that in other localities its specific action had not been fully appreciated. Dr. Smith had used it with great advantage in hemorrhage occurring with pregnancy, and also in post-partum hemorrhage. It may be used as a prophylactic against hemorrhage in every case of labor, and also against local absorption. He regularly employed it in hospital practice for this purpose, injecting the vagina with water at a temperature of 115° to 120° F., sufficiently impregnated with some disinfectant, in *every* case of labor, simple or complicated, and continued the injection until the water returned without tinge. To its use after plastic operations especially he wished to direct attention. In secondary hemorrhage from opening of large vessels we have in the hot-water douche a means for its control of which he wished to make special mention. Dr. Smith then referred to cases reported in a lecture recently published from Dr. Skene, of Brooklyn, and expressed himself surprised, in the first place, that Dr. Skene had found that the hemorrhagic diathesis prevented the performance of operations, and more surprised that he had been unable to control hemorrhage during operation. Dr. Skene had ignored entirely the virtues of the hot-water douche. Dr. Smith was perfectly satisfied that it would arrest hemorrhage in cases precisely like those reported by Dr. Skene, as well as in many other cases in which bleeding of an alarming character occurred. He then related the history of cases in which he had used this agent with most satisfactory results. He wished to direct attention to three points: 1, the great advantage of the hot-water douche over all means for arresting secondary hemorrhage; 2, its entire efficiency as a hæmostatic where it can be carried to the source of the hemorrhage; 3, the simplicity of its application.

Dr. Reamy, of Cincinnati, briefly referred to the merits of this remedy, and said that for some time it had been his custom to have a stream of hot water running over the surface during the perineal operation, instead of using sponges.

Drs. Chadwick, of Boston, Goodell, of Philadelphia, and H. P. C. Wilson, of Baltimore, spoke of the efficacy of the hot-water douche as a hæmostatic.

Dr. Campbell, of Augusta, Ga., indorsed what had been said in favor of the hot-water douche. So far as post-partum hemorrhage was concerned, he had relied upon iodine, as recommended by the late Dr. Trask, for its control—one part of tincture of iodine to three or four of water, and injecting it into the uterine cavity. Dr. Campbell also said there were two kinds of hæmostatics; one which acts on the calibre of the bleeding vessels, causing them to contract and so arrest the bleeding, the other acting chemically on the blood, and so plugging up the lumen of the bleeding vessel. The first kind is of service in post-partum hemorrhage, the second answers only for the arrest of hemorrhage in cases where it is necessary to produce a clot to obstruct the circulation.

Dr. Goodell referred to the efficacy of hot vinegar as a hæmostatic.

Dr. Mann, of Buffalo, referred to a case in which he was unable to control the hemorrhage with the hot-water douche.

Dr. Goodell thought Dr. Mann's case was one in which it should not be expected that the hot water would arrest the hemorrhage. [Cutting of the circular artery in cancerous tissue].

Dr. Barker asked what hæmostatic shall be used when the delay of fifteen or twenty minutes for the hot water to act could not be permitted without imminent risk of losing the patient's life. He was not prepared to answer the question. He had used in one such case the gentle application of cotton, wet in Squibb's fluid extract of ergot, and simply threw it out as a suggestion, that it might also possibly be of service in other cases.

The discussion was closed by Dr. Smith.

Dr. C. D. Palmer, of Cincinnati, then read a paper entitled

SOME POINTS CONNECTED WITH THE SUBJECT OF DYSMENORRHŒA.

That this condition is mechanical in its origin is one of the most natural conclusions. In a certain proportion of cases obstruction in the uterine canal exists, and in the region of the external os most frequently. But the interest in the paper centred in the arguments to prove that the disease is not mechanical in character, but a functional disease, essentially a neurosis. Dysmenorrhœa occurs without any abnormal condition of the uterus which can be detected. There are instances in which well-defined abnormalities of the uterus exist, and yet there is no dysmenorrhœa. There are cases of stenosis without menstrual pain. There are cases of well-defined flexion and yet no dysmenorrhœa. Other points similar in character were made by the author of the paper. In all cases treatment should be purely constitutional until the necessity for local exploration becomes apparent and justifiable. The dysmenorrhœa expresses a fault in the nervous system at large, and local treatment may be united to thorough attention in that direction, but the cases requiring it are very rare after thorough general treatment has been tested. Iron when the flow is scanty and lacks color; arsenic when the flow is prolonged and too frequent. The virtues of iron may be increased

by the addition of nux vomica, phosphorus, etc. Electricity may be of service, especially in the partly neurotic, spasmodic, rheumatic forms of the disease. He had used a combination of bichloride of mercury and iodide of potassium with good results, independent of any specific disease. Two remedies he directed special attention to: 1, concentrated tincture of cimicifuga racemosa in moderate doses three days prior to the period and continued in smaller doses throughout the flow; 2, tincture of pulsatilla given in a similar way. Dilatation is indicated only in the neurotic spasmodic forms, and then after failure of medical and constitutional treatment. If stenosis of the canal exists, it may be opened up by incision; and if it does exist it should be opened up before secondary complications caused by it are developed.

Dr. Chadwick, of Boston, said that he had listened to the paper with great satisfaction, because it contained much the same teachings which he had been accustomed to give for several years. He had been gradually giving up the belief in structural constriction of the cervical canal, and consequently the belief in obstructive dysmenorrhœa.

Dr. Barker, of New York, regarded the subject as one of great interest and importance, and had listened to the paper with much pleasure. In most respects he was in thorough accord with Dr. Palmer, and rose merely to supplement the paper with some new points concerning treatment. He believed that mechanical obstruction, as a cause of dysmenorrhœa, existed in only a small percentage of cases. That it does exist in some cases, he thought all were convinced. On the other hand, patients who have had dysmenorrhœa until they became mothers have had the dysmenorrhœa return just as badly as before when menstruation has been re-established; and, therefore, as had been stated by Dr. Chadwick, while dysmenorrhœa and mechanical obstruction may co-exist, they do not necessarily bear the relation of cause and effect. He believed there are two forms of dysmenorrhœa—one dependent upon the uterus itself, and the other ovarian. Either form may be painful, but he believed that by careful inquiry a differential diagnosis could be made between them. In the uterine form there are cases which do not depend on obstruction, and which are yet attended by great pain up to the time of the flow; but as soon as the flow begins the pain ceases, and the patient is comparatively easy during the remainder of the period. In such case he regarded the pain as due to an effort of the uterus to get rid of the plethora by rupture of capillaries, etc. These two forms occur both in plethoric women and in those whose general condition is the ideal standard of health.

With regard to treatment for these varieties he fully agreed with the author of the paper concerning the efficacy of iron; but the preparation which he had usually prescribed had been the lactate, three to five grains three times a day, generally associated with chlorate of potash. This treatment is begun about ten days before the menstrual period should appear. Another remedy, which is almost specific in uterine dysmenorrhœa, is *apiol;* but to get its good effects its use should be begun at least *two days before* the period should return, and kept up in the period. Give *two* capsules, usually, after each meal.

There is another class of cases in which the flow is unattended by pain until it has continued for two or three days. These patients are usually strong, of full habit, complain of headache, vertigo, imperfect vision, etc., previous to the period. These belong to the ovarian variety, and here he uses the bromides, preferably the bromide of sodium, beginning about a week before the period and administering from ten to fifteen grains in the middle of the forenoon, afternoon, and at bedtime. Apiol is also serviceable in these cases.

The further discussion of Dr. Palmer's paper was postponed until the reading of papers had been completed.

The Society then adjourned to meet at 10 A.M. on Wednesday.

Wednesday, September 19th—Second Day—Morning Session.

The Society was called to order at 10 A.M. by the President.

Dr. Gilman Kimball, of Lowell, Mass., President, then delivered the annual address, which consisted of a

BIOGRAPHICAL SKETCH OF DR. NATHAN SMITH, FOUNDER OF THE DARTMOUTH MEDICAL COLLEGE,

the genius, indomitable will, untiring energy of whom, the speaker believed, had done more for practical medicine and surgery than that of any other single individual in this country. With regard to his connection with the subject of ovariotomy, he was the second to perform it successfully in this country, the operation taking place at Norwich, Vt., in July, 1821. It was as truly original as was the first performed by McDowell, and simply by priority of date was McDowell distinguished beyond dispute as the father of ovariotomy. It was not Dr. Kimball's purpose to raise any question as to the justice of this claim, now acknowledged throughout the civilized world. While listening to the memorial address by Professor S. D. Gross, at the unveiling of the monument erected to McDowell, it occurred to him that something more might justly be said than to merely chronicle the fact by saying that Smith had the courage to follow in the footsteps of McDowell.

The President then gave a biographical sketch of Dr. Smith, who was born of respectable parents in Massachusetts, September, 1762. From this point the speaker traced the career of the subject of his discourse through his school days, entrance upon his professional work, and his subsequent labors as a physician and surgeon, in which were exemplified "the eagle's eye, the lion's heart, and a woman's hand."

The address closed with special reference to the operation of ovariotomy, and the opinion was expressed that, in point of absolute merit, Dr. Nathan Smith is entitled to the same honors which have been bestowed upon Ephraim McDowell.

After a few complimentary, and to a certain extent critical remarks by Professor S. D. Gross, of Philadelphia,

Dr. Reamy, of Cincinnati, read a paper entitled

A RARE FORM OF ABDOMINAL TUMOR.

The author of the paper related the history of three cases. The leading features as presented in the first case, seen in consultation, in July, 1878, were the following, as they existed in a patient thirty-eight years of age, married fifteen years, sterile, and in ordinary good health up to three years ago, and who was supposed to be suffering from ovarian tumor. The growth was abdominal, in front of the intestines, cystic, and contained fluid. It had no connection with either the uterus or its appendages, and no special change was produced in the condition of the abdomen whether the patient was in the upright or horizontal position. The fluid, removed by tapping, was red and contained blood-corpuscles, both in good condition and broken down. The paper closed with a brief reference to the scanty literature of the subject—namely, tumors of the omentum, and the three cases reported belonged to the variety of bloody. Microscopical examination revealed the tumor (the specimen presented) to be sarcoma.

Dr. C. C. Lee, of New York, thought the cases belonging to the group described by Dr. Reamy were very rare, and that the possibility of diagnosticating sarcoma of the omentum before induration had occurred had not been established. He could conceive that if the general rule of tapping was established this class of cases would become much better known than at present.

Dr. Sutton, of Pittsburg, thought it impossible, beforehand, to determine whether, in any given case of tumor of the omentum, the disease was sarcomatous or carcinomatous. But if the tumor contains fluid, he

thought it dangerous practice to use either the aspirator or trocar. If the surgeon feels justified in opening the belly to obtain fluid for examination, use the hypodermic syringe. Besides, Dr. Sutton believed, in the present stage of surgery, that the operator is justified in discarding all punctures and in opening the abdomen by an exploratory section. If it is believed that the tumor is malignant after the opening has been made, the best surgery is to close the wound without interfering with the growth.

Dr. Campbell, of Augusta, Ga., thought that such growths were apt to be pedunculated, and that it was well, therefore, to remove the tumor and give the patient an additional chance.

Dr. Reamy believed that, all things considered, tapping is a justifiable procedure, at least for the relief of symptoms. In two of his cases the operation was followed by recovery, and he believed it to be as well to tap as to cut the belly open.

A paper by Dr. Jenks, of Chicago, on

A NEW METHOD OF OPERATING FOR FISTULA IN ANO,

was read by title.

Dr. H. F. Campbell, of Augusta, Ga., then read a paper on

CONGENITAL FISSURE OF THE FEMALE URETHRA, WITH EXTROPHY OF THE BLADDER.

A case was reported, and the interest centred in the question, When is the proper time to operate? It is a matter of quantity of tissue and space. He held that after puberty the operation might be performed with prospect of better result than if performed with the present limited quantity of tissue and space. The patient was a young female child.

Dr. Browne, of Baltimore, related the history of a case with calculi, occurring in a child eight years of age. He proposed to perform the supra-pubic operation, and remove the calculus, but the family postponed it and the child died.

Dr. Mann, of Buffalo, narrated a similar case to that reported by Dr. Campbell, and in which he advised operation at once, which was performed by Dr. Minter, of Buffalo, and with completely satisfactory results.

Dr. T. Addis Emmet, of New York, then read a paper entitled

A STUDY OF THE ETIOLOGY OF PERINEAL LACERATION, WITH A NEW METHOD FOR ITS PROPER REPAIR.

During the last twenty years the author of the paper had given more thought to this subject than to any other likely to be brought before the Society. He had reached the conclusion that simple laceration of the perineum, extending even through to the sphincter, but not involving it, produces no inconvenience after the parts have once healed, except by the disturbances occasionally found of a reflex character from the presence of cicatricial tissue. It has been frequently observed that the disturbance after laceration of the perineum is not in proportion to the extent of the injury; also that the perineum has been lacerated for years without causing inconvenience; on the other hand, it has been equally puzzling to explain the amount of suffering attending the slightest degree of injury; and again, that the same kind and amount of suffering is experienced when no injury of the perineum has been received.

Notwithstanding the many modifications of Baker Browne's operation, Dr. Emmet believed that no one had relieved any of this class of patients by simply uniting the tissues which had been lacerated, and no more. *Some portion of the posterior vaginal wall must be engaged in the line of union in order to secure any benefit.* The true condition of the parts he regarded as a rupture of the pelvic fascia reflected over the muscles of the vaginal outlet, and that to afford relief this fascia must be restored as nearly as possible to its original position.

In the operation it is useless to carry denudation so far externally as is often done. It should be limited to the true osteum vaginæ, and the perineum should be further strengthened by bringing forward a transverse fold of the posterior wall of the vagina, even if there is no rectocele. The mistake should be avoided of taking too much of the posterior wall. The essential features of the operation are as follows: Make two transverse crescentic denudations, an outer one with concavity looking backward and an inner one with the concavity looking forward. To establish the situation of these crescents, three tenacula are to be employed. With two of these instruments the open mouth of the vagina is to be brought together by inserting the points at the level of the upper limit of the remains of the hymen, one on each side. The points thus seized would mark the extremities of the anterior crescent, and while they are held together with the instruments the third tenaculum is to be inserted in the posterior vaginal wall in the median line, at a point that could be drawn forward to meet the two former without giving rise to undue tension. This point would mark the centre of the posterior crescent. The denudation having been effected, the two crescentic denuded patches are to be stitched together. This has the effect of drawing the tissue of the perineum upward so that the vertical rent in the median line will be much shortened, and can now be closed with a few sutures, the last step not being essential.

The paper gave rise to a considerable number of questions, which Dr. Emmet answered, and illustrated his plan of operative procedure upon the black-board. The discussion of the paper was postponed until the afternoon session.

The Society then adjourned to meet at 3 P.M.

Second Day—Afternoon Session.

The Society was called to order by the President.

Dr. Emmet's paper being before the Society for discussion, the author gave a brief *résumé* of his views as follows: Laceration of the perineum does not produce the trouble which is attributed to it. It is never lacerated as it seems to be; there is no such tissue there. The tissue in front of the rectum is frequently thicker than before the injury. No such body exists as the perineal body as it is represented in the books, and as operators strive to restore. The injury is more apparent than real. He held that even if the laceration of the perineum is not repaired the injury can be best repaired by bringing together a certain portion of the posterior wall of the vagina just at the entrance of the vagina, where it joins with the soft parts. He further held that we may exclude, in performing any operation, everything with reference to the external organs of generation outside of the line of the hymen around the vagina. The fascia, forming two sulci, is as important to keep up the perineum, the posterior wall of the vagina against the anterior wall, as a pair of suspenders is to keep the seat of a pair of pantaloons in place. By his operation, bringing a fold of the posterior wall of the vagina up, we restore the attachments and support, and may let the perineal injury go entirely, if the operator chooses to do so; it matters little whether or not stitches are introduced. The special feature was the part which the pelvic fascia plays in supporting these parts, and that the perineum has little or nothing to do with it. Whenever a condition is seen in which the posterior wall of the vagina is not in contact with the anterior wall, we might be sure that the *fascia* is not in proper condition.

Dr. Reamy, of Cincinnati, thought that if this operation was to be substituted for the one so admirably described by Dr. Emmet in his book, it was a comfort to know that he had had an opportunity to undo the great

evil which he had done. He concluded from Dr. Emmet's last explanation, as well as from the paper itself, that Dr. Emmet believed all the perineal tissues down to muscles amounts to nothing. If this is true he should not be surprised to see some child born with all these parts lacking. He asked Dr. Emmet if he had not found any number of superficial lacerations where stretching of the posterior wall of the vagina does not exist, the separation from the deeper tissue is not great, and yet the posterior commissural junction of the labial walls on both sides up to the entrance of the vagina are lying above the circle of the hymen as it exists in the virgin state? He was unable to see how the proposed operation could do more than dispose of redundancy of tissue in the posterior wall of the vagina in a limited number of cases, and could not agree with Dr. Emmet if he recommended it as a substitute for his former operation for this injury.

Dr. Frank P. Foster, of New York, denied entirely that the perineum has anything to do with the support of the structures above it, when all the parts are in a normal condition. He thought there was not a single instance in anatomy where an organ rested upon anything beneath it. What the perineum will do, and often does do, but what it does not do normally, is quite another question. But it does not by any means follow that the perineum has no function.

Dr. Sutton thought that any operation for lacerated perineum that did not have for its object the speedy restoration of the perineal body could not stand in the light of the teachings of the last ten years.

Dr. Emmet said he expected it would be stated that he had denied the existence of the perineum, although he had endeavored to explain how it was lacerated and drawn to each side like the separation of a curtain. He did not deny the existence of the perineum, but simply denied that any such surface exists as we have been led to believe, and which operators have aimed to build up. He thought the gentlemen would not disagree so much with him as appeared when they could have the opportunity to study his paper leisurely and carefully.

Dr. C. C. Lee, of New York, then read a paper on

THE MANAGEMENT OF ACCIDENTAL PUNCTURE AND OTHER INJURIES OF THE GRAVID UTERUS AS A COMPLICATION OF LAPAROTOMY,

in which he gave the details of seven cases of this rare complication—all he could find in medical literature—including one that had occurred in his own practice. From them he deduced the following conclusions:

First.—The pregnant womb may be punctured or otherwise wounded during laparotomy without necessarily causing abortion.

Second.—Miscarriage seems with *a priori* and from clinical evidence to depend upon injury of the uterine contents, not of the womb itself, however severe.

Third.—If the former has certainly occurred, Cæsarean section is indicated and should be promptly performed. In this case the utmost care must be subsequently taken to secure thorough drainage from the uterine cavity.

Fourth.—If the uterine walls alone are injured, the wound is to be treated on general principles. If a deep puncture or incision, it must be sutured with the minutest care, with exact coaptation of the edges. For this purpose fine silk sutures, rendered antiseptic, are the best. If a nick or superficial puncture, it must not be ligated, for ligatures cut quickly through uterine tissue; if too small to be sutured, the bleeding points must be lightly touched with the thermal cautery until oozing has ceased. Good surgery and the dictates of humanity alike demand that under such circumstances a chance of survival be given the child as well as the mother.

The paper was discussed by Drs. Wilson, of Baltimore, Garrigues, of New York, and Byford, of Chicago.

Dr. A. Reeves Jackson, of Chicago, then read a paper entitled

IS EXTIRPATION OF THE CANCEROUS UTERUS A JUSTIFIABLE OPERATION?

The purpose of the paper was to discuss the single question in view of the facts known to us. His conclusions were as follows: He had endeavored to show: 1. That diagnosis of uterine cancer cannot be made sufficiently early to insure its complete removal by extirpation of the uterus. 2. When the evidence can be established, there is no reasonable hope of effecting a radical cure, and other methods of treatment offer far less dangers than excision of the entire organ, and are equally effectual in the amelioration of suffering, retarding the progress of the disease, and prolonging life. 3. Extirpation of the uterus is highly dangerous, and neither lessens suffering—except in those whom it kills—and does not give a reasonable promise of recovery, and should not be adopted in modern surgery.

Dr. Van de Warker, of Syracuse, explained how he had sloughed out the uterus by means of chloride of zinc, and exhibited microscopic sections which he believed illustrated that tissue not the seat of cancerous infiltration had been reached. He had operated in this manner in eight cases and with gratifying results.

Dr. Emmet, of New York, said that the author of the paper had fully expressed his own convictions concerning this operation. He had opposed the operation from the beginning.

Dr. Baker, of Boston, said he was a believer in the local origin of cancer, and therefore that operative measures were of great advantage. He explained at some length his method of operating without removing the uterus, and several of his patients still lived, now at least five years after the operation was performed, and are apparently well. We thought that sufficiently early diagnosis could be made in many cases as to allow of complete removal of the disease. He thought that the cases in which complete removal—extirpation of the uterus—is justifiable were few in number.

Dr. Palmer, of Cincinnati, endorsed Dr. Jackson's paper.

Dr. Sutton, of Pittsburg, thought the operation justifiable, and described different methods of operating, as practised by Schroeder and Martin.

Dr. Jackson, in closing the discussion, said that in performing this operation the operator was like the gamester who stakes what he does not own, the life of his patient against the heaviest of odds.

OFFICERS FOR THE ENSUING YEAR.

President—Albert H. Smith, Philadelphia; *Vice-Presidents*—James R. Chadwick, Boston; Samuel C. Busey, Washington; *Secretary*—Frank P. Foster, New York; *Treasurer*—Matthew D. Mann, Buffalo; *Members of Council*—T. G. Thomas, Fordyce Barker, New York; T. A. Reamy, Cincinnati; R. S. Sutton, Pittsburg; R. B. Maury, Memphis.

The Society then adjourned to meet on Thursday, at the close of the Executive Session.

[To be concluded.]

The Numerical Strength of the Profession in Paris.—The *Revue de Thérapeutique* gives an exact census taken of all the practitioners in Paris at the present time. There are in Paris and the communes of the department of the Seine, 1,915 doctors of medicine, 12 doctors of surgery, 83 *officiers de santé* 43 foreign doctors, 1,500 midwives, 845 *pharmaciens*, and 95 veterinary doctors. One of the oldest doctors in Paris is M. Ricord, born in 1800, and made a doctor in 1826. These figures are, of course, exclusive of the host of illegal practitioners of all kinds to be found in Paris.

STATE MEDICAL SOCIETY OF VIRGINIA.

Fourteenth Annual Session, held at Rockbridge Alum Springs, Va., September 4, 5 and 6, 1883.

(Concluded from p. 302.)

THE newly elected President, DR. J. EDGAR CHANCELLOR, of Charlottesville, being in the chair, the afternoon session, September 6th, was opened by DR. S. K. JACKSON, who read the report on

ADVANCES IN THE PRACTICE OF MEDICINE.

He said that although Huxley has dated the advance of medicine as occurring eight centuries ago, scientific medicine can be hardly said to have made much progress until the discovery of oxygen, and showed how much benefit the profession has derived from the young science of biology. By the advancement of the germ theory, the pathology and therapeutics of all diseases of parasitic origin have been revolutionized in the past few years, and the study of the differences between germicides is one of the most important questions of the day in practical medicine. For years mercury has been employed for the destruction of epizoæ, but the profession, until within a comparatively late interval, did not know how much good in the destroying of entozoæ was being done by its administration. Dr. Jackson proffered the law "that no organism can live in its own excreta—that the products of its life-processes become poisonous to it, stop its ravages, and destroy its life." He believed that it is only as a germicide or antidote that quinine is to be used, without reference to any other therapeutical or physiological quality it may possess. He spoke in favor of Koch's discoveries, announcing his full belief in their practical importance. Concluding, he gave some very interesting mortality statistics of the city of Norfolk, Va., showing the diminution in its death-rate from medical attention.

DR. DABNEY, of Charlottesville, said that "tubercular bacilli" are not yet proven, as the same micro-organisms have been found in many other places. He also instanced the fact that at the Brompton Hospital for Consumptives over fifteen thousand patients were treated in twenty years, and during that time there was no case of tubercular disease occurring among the attendants.

Dr. Wm. C. Dabney, of Charlottesville, read a volunteer paper entitled,

THE PRESENT ASPECT OF THE BACILLUS TUBERCULOSIS QUESTION.

He did not believe in the value of Koch's so-called discovery of the bacilli of tubercle, in the face of the contradictory testimony offered by so many other observers. Lichtheim and Cramer have found micro-organisms, behaving precisely like Koch's bacilli with staining fluids, in the fecal discharges of healthy individuals; Spina claims to have found similar organisms in pus from a rabbit's thigh, formed after traumatic injury; Echile has found bacilli in purulent discharge from the ear, and Rosenstein has found them in the urine. Koch says that the bacilli are present in the incipiency of tuberculosis, and are its essential cause, while Spina states that they are only found in caseous tubercular deposits that have been exposed to the atmosphere, and do not cause the disease. Koch's experiments have been mostly performed on the lower animals, rats, rabbits, and guinea-pigs, and Dr. Dabney points out the fact that the inoculation of these animals with various substances is liable to lead to caseous inflammation and tuberculosis.

DR. CHAS. M. SHIELDS, of Richmond, read the report on

ADVANCES IN OPHTHALMOLOGY AND OTOLOGY,

in the course of which, after dwelling on some of the advances in the physiology of the eye, he mentioned the investigations made in Dr. Hirschberg's clinic, bearing on sympathetic ophthalmia, in which after the enucleation of four eyes which had been subjected to the operation of neurotomy from two months to four years before, the ciliary nerves were found to have reunited. He thought that neurotomy should not be adopted as a substitute for enucleation unless the patient could be under occasional observation afterward, so that the eye could be enucleated if the cornea again becomes sensitive. The operation of trituration of the cortex of the lens in incipient cataract, to hasten its maturity, was favorably commented upon. The use of antiseptic precautions in cataract was advocated, but the spray of carbolic acid should be used before the operation to disinfect the air of the room. He does not use it during the operation because of its liability to dull the instruments, these latter being disinfected in alcohol. An addition to the therapeutic agents appropriate to the treatment of iritis, is the sulphate of eserine, used after the manner of Dr. Seely to contract the blood-vessels of the iris, while mydriasis is still kept up by atropine. It was also recommended in the suppuration following cataract extractions, the pupil being kept dilated here too by atropine. In peripheral ulceration of the cornea, eserine is becoming popular, and as a treatment for acute glaucoma its merits are better recognized. The electro-magnet for removal of metallic substances from the vitreous and ciliary bodies, the hydrobromate of homatropine for transient dilatation of the pupil for ophthalmoscopic examination, and the value of nitrite of amyl in amaurosis resulting from large doses of quinine were all mentioned at length. Passing to otology and laryngology, the reporter advised sulphide of calcium in doses of from one-sixth to one-fourth grain every two or three hours, in inflammation of the external auditory meatus and furuncles of the meatus. He had also found it useful in mastoid disease, but liberated pus when found to exist. The use of special instruments in removing foreign bodies from the ear was deprecated, as the larger proportion of them could be removed without harm by the syringe. In suppurative inflammation of the middle ear, the dry method of treatment had been found the most effectual. Powdered boracic acid is blown into the canal until it is filled, and kept in place by a bit of cotton, after preparing the ear by cleansing it with borated cotton instead of the syringe; this mode of treatment often curing old cases of otorrhœa in two or three applications. The reporter advised the plan of Schalle in treating many cases of nasal and post-nasal catarrh, which is to apply powders of nitrate of silver and calcined magnesia, in the proportions of 1 to 6, 1 to 10, or 1 to 15 parts, to the nasal and post-nasal cavities. He closed by stating his belief that hypertrophic nasal catarrh was never permanently cured, until the redundant tissue had been removed, either by Jarvis' snare or the galvano-cautery.

Upon the conclusion of his paper Dr. Shields exhibited a sample of the new remedy for granular lids and pannus, abrus precatorius, or jequirity seeds, at the same time giving reasons for his belief that the seeds were not such a new article and great rarity as is commonly supposed.

Drs. Parker, Jackson, and White discussed the paper, the latter reading a monograph upon the subject of jequirity, in which he gave the testimony for and against the drug, concluding that its value has been clinically demonstrated to exist, and that it appears as if the profession has in its hands a remedy for that disgrace of eye surgery, granular ophthalmia.

DR. J. A. WHITE, of Richmond, read a volunteer paper on

INJURIES TO THE EYE,

illustrated by reports of a number of cases. So little is said concerning these affections in the text-books, that the detailed cases reported by Dr. White were of extreme interest and value, those illustrative of concussion and compression being especially so. One of the cases was peculiar for the rapidity of blood-absorption in the eye.

The patient, a boy of fourteen years, was struck in the eye by a stone July 1st; treatment by muriate of pilocarpine, for hemorrhage into the vitreous, began on the 4th; on the 6th, the vitreous was perfectly clear from blood; probably one of the most rapid absorptions of the kind on record, as the time occupied is usually from three to six weeks. Another remarkable case was that of a boy twelve years of age, who was struck with great force on the eye when the lids were closed, by a stone from a "gravel-shooter," rupturing the anterior capsule, without cataract following the injury. Dr. White stated that this result was almost unique, he had never seen a similar instance in fifteen years' eye practice. The iris was somewhat torn, and the exuding blood acted as a kind of plug to prevent opacification of the lens substance by the aqueous humor He concluded with some very practical remarks on the stretching the zonula of Zinn, and dislocation of the lens, with cases.

Dr. George Ben Johnston, of Richmond, presented a report of forty-seven cases of

URETHRAL STRICTURE TREATED BY INTERNAL URETHROTOMY.

He claimed this operation as the surest method of curing stricture in the male urethra. The main features of his treatment are thorough division of the stricture and persistent local treatment for a long time afterward. He stated that many of his cases were re-examined from four months to four years after cutting, and no contraction was found.

Dr. W. F. Barr, of Abingdon, chairman of the Committee on Advances in Hygiene and Public Health, did not report in full, but made an apology to the Society in writing, in the course of which he pointed out the facility with which any person is able to practise medicine in the State of Virginia, by the simple payment of a license fee, and mentioned the ineffectual efforts made in past years to procure remedial action from the Legislature.

The Secretary read a preamble and series of resolutions presented by Dr. W. G. Rogers, of Charlottesville, which were unanimously adopted, in favor of the Society appointing a committee to petition the Legislature at its next session to make it a penal offence for any druggist to refill a prescription containing opium, morphia, or any other narcotic poison, for any person, without the special order of a physician to that effect, on account of the influence in producing the "opium habit" and its kindred affections which the habit of indiscriminate prescription refilling, at present so common, has so often brought about.

Dr. Rawley Martin, of Chatham, read a volunteer paper devoted to a description of an

EPIDEMIC OF DIPHTHERIA IN PITTSYLVANIA COUNTY,

occurring during the summer and fall of 1882. The origin of the epidemic was never found, although carefully searched for, and it seemed to have arisen spontaneously. All the cases were developed either along small watercourses, or near places where rank vegetation was most abundant, although one of the worst cases occurred in a private house, where the best sanitary conditions possible existed, miles away from any point of contagion. Decided croupal symptoms were generally absent, and many cases died after all throat affections had subsided. No adults suffered from severe symptoms, and the children attacked who died were between three and twelve years of age. Nursing children suffered from symptoms of an erysipelatous character. The epidemic subsided as suddenly as it had begun, and was followed by a general outbreak of follicular pharyngitis. A full dose of calomel at the beginning of a sthenic case of the disease invariably modified its course, and alcohol was one of the best remedies in all instances. A number of cases were saved by rectal alimentation. Sanitary conditions seemed not only to be of little use, but where they existed the symptoms were most malignant.

Dr. Wm. H. Coggeshall, of Richmond, gave

REITER'S THEORY OF DIPHTHERIA,

which is simply that the disease is caused by the fibrin-destroying function of the liver not being properly fulfilled, and, as a natural sequence, calomel is indicated for the restoration thereof. Dr. Reiter gives twenty grains at once, and ten grains every hour afterward, until half an ounce of the drug is taken.

Dr. Bedford Brown, of Alexandria, read a paper based upon his

THIRTY YEARS' PERSONAL EXPERIENCE IN DIPHTHERIA.

He thought, from his observation, that two of the gravest symptoms in this disease are the peculiar erratic decline of the heart's action and the almost correspondingly rapid decline in the number of red corpuscles in the blood. His experience has taught him to believe thoroughly in the non-identity of membranous croup and diphtheria. It seemed to him very often that the cases where fever remained when the local symptoms began to abate succeeded the best. He recalled the time when diphtheria was considered a malignant type of a local disease. One of the very great favorites in local treatment then was a mixture of myrrh, creasote, and turpentine. He pointed out the different modes of using mercury. Formerly emetics were given, and then mercury in large sedative doses; in later times we give the latter in small, frequent, alterative doses. Quinine has held favor for use in this disease longer than any other drug, certainly for over a quarter of a century. He thinks that the paralytic effect of the diphtheritic poison on nervous systems can best be retarded by alcohol. He never saw a serious case recover where alcohol was not used. His experience has taught him that if belladonna, ergot, or digitalis cannot stay the paralyzing effect of the poison on the heart through the sympathetic system nothing else will. Such powerful agents as bromine and carbolic acid should be used locally with great caution. Dr. Brown always pays the greatest attention to the digestive organs during an attack of diphtheria, as in every serious case such organs are more or less in a condition of paralysis, and it often becomes a vital question as to how the patient shall procure enough strength from food to support the powers of life. He sustains the patient by means of diffusible stimulants, gives them plenty of fresh air and digestible food, and believes in the great importance of keeping the nose and throat as clean as possible. For this latter purpose he uses with an atomizer, listerine, 1 oz.; aq., 4 oz.; Labarraque's sol., ½ oz.; carbol. acid, 6 drops. Internally, tinct. ferri chlor., 2 dr.; chlor. pot., 1 oz.; tinct. nuc. vom., 20 drops; tinct. digitalis, ½ dr.; aq., 2½ oz.; one teaspoonful every two hours.

Dr. Dabney said that he had seen cases occur where excellent sanitary surroundings were present, and was positive that peritonitis had been a sequela of diphtheria in his observation.

Dr. S. B. Morrison, of Rockbridge, never saw a case that was not constitutional in origin, but believed also in the constant use of local treatment. His own observation had taught him that the diphtheritic poison can remain quiescent in one place for years, and then break out suddenly. He thought that all our remedies should be used at shorter intervals in the disease than is the present practice, and that where the vitality of an individual is strong the disease cannot be contracted, notwithstanding full and frequent exposure. He had no doubt but that the germ of typhoid fever and diphtheria was the same, with a different manifestation in each case; and strongly believed in complete isolation of the patient in the latter disease.

Dr. St. Pierre Gibson, of Staunton, believed that peritonitis may be produced by diphtheria, citing a case in point; and had no doubt about the fact that the poison of diphtheria may linger in mountain regions for years without sign, and then suddenly become endemic.

Dr. A. M. Fauntleroy, of Staunton, cited a case to

show its peculiar contagious or infectious properties, which had occurred in his own practice. A child dying from diphtheria at a distance was brought home, its body, packed in ice, lying for a few hours before burial in a room. A day or two afterward a strong, healthy servant-girl cleaned up the floor with warm water, where the ice surrounding the body had melted and dripped, and within a short space of time developed a malignant case of the same disease. In another instance a boy stopped over night at a house where diphtheria had occurred some time before, and the next day entered an asylum for deaf mutes, where thirty-two cases of the disease appeared in a few days. He had often found general disturbance before any appearance of local lesion. He thought local treatment was mainly important, because the membrane present becomes, after a time, putrefied, and, of course, if left alone the putrescent poison would be carried into the circulation by the lymphatics. This was the reason for the local employment of disinfectants. He found one of the most unpleasant concomitants of the disease to be the inability of the patient to ingest food, and instanced one case of recovery where the child was fed for three weeks through a tube. The local application he preferred was a combination of Monsel's solution, carbolic acid, and glycerine, applied with a brush. For internal treatment he used chlorate of potash, large doses of tincture of iron, five-grain doses of quinine, and unstinted whiskey.

Dr. William Selden, of Norfolk, during forty years of practice, had never known a better systemic form of treatment than the chlorine made from muriatic acid and chlorate of potash according to "Watson's Practice," first edition. Of this he uses one-half drachm to four ounces of water, and has never seen a case die under such treatment. For local application he employs, alum, two drachms; salicylic acid, one drachm; sulphur, one drachm, with enough glycerin to bring the mixture to the consistence of honey, applying with camel's-hair brush. This may be styled the general Norfolk treatment.

Adjournment to 7.45 P.M.

Evening session opened at the time appointed, the President, Dr. J. Edgar Chancellor, in the chair.

Invitations were read from Rockbridge Alum Springs, Blue Ridge Springs, and Rawley Springs, asking the Society to accept the hospitalities of each place for next year's meeting. After full resolutions of thanks had been voted to the Rockbridge Springs Co. for their hospitality of this year (all delegates having been received free of charge during the session), the invitation from Rawley Springs was accepted. An invitation from Alleghany Springs was received too late to be voted upon.

Dr. A. M. Fauntleroy, of Staunton, read a paper, by invitation, on

THE THERAPEUTIC VALUE OF ROCKBRIDGE ALUM WATER.

He gave a full description of the ten springs located at the place of meeting, and fully described the great value of the water in scrofulotic and syphilitic disorders, the different waters being extremely alterative and deobstruent in their action, and particularly valuable in many instances in dissolving tubercular deposits. In cases of dyspepsia the water of one or more particular springs diminishes the acid secretion from diseased gastric tubules, and in torpidity of the liver it restores the normal activity of that organ, probably through the presence of sodium sulphate held in solution.

The President, Dr. J. Edgar Chancellor, delivered a short address upon the therapeutical employment of the Rockbridge alum waters, enumerating several serious cases of strumous disease in his practice which were entirely cured by their use.

Dr. J. Marion Sims, of New York, Honorary Fellow of the Society, by letter greeted his fellow members, and sent his best wishes for the success of the Society.

Dr. J. J. Chisholm, of Baltimore, made a few practical remarks on diphtheritic eye troubles.

Dr. L. McLean Tiffany, of Baltimore, in the course of his remarks upon

TRACHEOTOMY IN DIPHTHERIA,

stated that in his opinion, while the operation never cures the disease, but simply relieves one oppressive symptom, it never kills the patient. He thought that it is almost impossible to decide just when the difficulty of breathing comes from the top of the windpipe, this indicating the value of the operation. He never had been able to exactly determine when the obstructing membrane was above the sternum and when it was below the common point of opening; and related the particulars of a peculiar case where he opened the trachea just before death, and found the windpipe so completely plugged with diphtheritic exudation that neither a tracheotomy tube nor a probe could enter.

Dr. L. B. Edwards, of Richmond, mentioned a case where tracheotomy relieved dyspnœa, although the membrane was below the point of opening.

Dr. W. W. Parker, of Richmond, begged the younger members not to become discouraged when they lose a patient from diphtheria, as he did not believe that any physician saves all his cases of that disease.

Dr. J. N. Mackensie, of Baltimore, stated that one of the after-effects of diphtheria not generally mentioned is adenoid growths in the post-pharyngeal space. He believed that the simplest treatment for the disease is the best, and relied mainly upon steaming for local treatment. He thought the later German topical application (one to two grains bichloride of mercury to one pint of water), was excellent.

Dr. R. I. Hicks, of Casanova, mentioned a peculiar instance where a diphtheritic patient associated with many persons in the same locality without the production of another case of the disease.

Drs. Patterson, Whiting, Craddock, and others, discussed the subject of diphtheria and related a number of cases.

Dr. S. K. Jackson, of Norfolk, by request, described his method of preventing

CHOLERA INFANTUM.

He gives the following preparation to any child that is liable to contract the disease: sulphite of soda, hyposulphite of soda, bicarbonate of soda, each 32 grains, aromatic syrup of rhubarb, 2 ounces. One teaspoonful or less, according to age, every two hours each morning, until two or three doses are taken. He claimed never to have had a case of the disease in his practice since using the preparation.

The remainder of the session was occupied in transacting Society business, and after deciding upon malarial fever as the topic for general discussion at the next meeting, the Society adjourned to meet at Rawley Springs, in September, 1884.

There has never before been a meeting, in the history of the Society, so remarkably well attended and so replete with interest and instruction to the members, as that of 1883. Among the visitors present, Drs. Chisholm, Tiffany, and Mackensie, of Baltimore, Md., may be mentioned as having assisted greatly to make the session one of extreme practical value.

The officers elected for the ensuing year were: *President*—Dr. J. Edgar Chancellor, of Charlottesville; *First Vice-President*—Dr. S. B. Morrison, of Rockbridge; *Second Vice-President*—Dr. J. A. Graybill, of Amsterdam; *Third Vice-President*—Dr. Bedford Brown, of Alexandria; *Fourth Vice-President*—Dr. S. K. Jackson, of Norfolk; *Fifth Vice-President*—Dr. J. M. Estill, of Tazewell C. H.; *Sixth Vice-President*—Dr. T. J. Pretlow, of Jerusalem; *Recording Secretary*—Dr. R. B. Cabell, Jr., of Richmond; *Corresponding Secretary*—Dr. Hugh Taylor, of Richmond; *Treasurer*—Dr. R. T. Styll, of Richmond; *Executive Committee*—Dr. W. W. Parker, of Richmond, chairman; Drs. Black, Cunningham, Claibourne, and Gleaves; all other committees holding over.

Correspondence.

SUPPORTS TO THE PELVIC ORGANS.

To the Editor of The Medical Record.

Sir: In studying various branches of surgery we are compelled to consider minutely the relations of various organs to one another, and many of them, such as arteries, veins, and nerves, are of great interest, inasmuch as they are directly concerned in many operations, and are the object to be reached or avoided, as the case may be, by the surgeon. Again, we study the relation of organs constituting the thoracic, abdominal, and pelvic viscera, that we may detect with accuracy certain pathological conditions, and at the same time determine the cause and select a method of treatment.

It seems to me that in no branch of surgery is this latter class of relationships so important as in that pertaining to diseases of women.

Do not understand me to say that a derangement in the situation of the pelvic organs is of more moment as regards the life and comforts of the patient than that of any of the thoracic or abdominal organs, but that the importance to the surgeon is in exact ratio with the facility with which abnormalities can be detected and treated, is a matter which I believe is generally appreciated.

Among the many disorders described by gynecologists, and the numerous causes to which they are attributed, there are some which I believe to depend upon conditions which have heretofore been unnoticed, or, if noticed, regarded of such slight value as to have escaped mention. These conditions are involved in the construction, relation, and action of the interfemoral and ischio-rectal regions, the nates, and the obturator internus muscles.

Respecting the ischio-rectal region, we have situated on either side of the rectum the ischio-rectal fossa, bounded internally by the sphincter ani, levator ani, and coccygeus muscles; externally by the tuberosity of the ischium and the obturator fascia, which covers the inner surface of the obturator internus muscle; limited in front by the perineal body, and behind by the lower border of the glutæus maximus muscle, and the great sacro-sciatic ligament. Each fossa is filled, in the healthy state, by a mass of adipose tissue of a triangular shape, with its base directed downward and resting upon the integument of this region.

Each mass will measure one inch transversely, one and a half inch antero-posterior, and two inches in length.

Now, when we consider the location, relation, and magnitude of the two bodies, and compare them in these various respects with the perineal body, it is reasonable to suppose that each of the three perform a similar function; but before describing this, I wish to speak of the interfemoral region.

We have covering the adductor group of muscles of either thigh a thick layer of fat, increasing in thickness as it approaches the perineum, and in the well-formed female sufficiently abundant to closely approximate the thighs. It will be noticed also that these accumulations of fat are controlled principally by the adductor muscles, and can be elevated and brought firmly together at the will of the person.

I know of no simpler way of demonstrating the action of these parts, than by calling attention to the phenomenon which takes place in an effort made by an individual to prevent an untimely discharge from the bowels or bladder.

This consists in expelling the air from the lungs, firmly adducting the lower limbs, and rotating them outward. By expelling the air from the lungs, the pressure within the abdominal cavity is diminished.

The adduction of the thighs is a very important act, nasmuch as it presses the interfemoral masses of adipose tissue firmly together, and upward against the perineum, and having combined with it the outward rotation, produced partly by the lower border of the glutic maximus and the obturator internus muscles, we have the nates brought firmly together and pressing upon the ischio-rectal region. Thus the whole floor of the pelvis is raised, and the organs wedged upward near the brim and against the sacrum. By the contraction of the obturator internus muscles (which means an approximation of its extremities *and an increase in thickness*), we have a pressure exerted directly upon the sides of the pyramidal-shaped mass of fat contained within the ischio-rectal fossa, and indirectly upon the sphincter ani and levator ani muscles, and the capacity of the pelvis diminished.

Through this combination of forces we have a condition produced which relieves the sphincters and the muscles of the perineum from the strain brought upon them by the pressure from above.

The mass contained within the rectum is elevated, the urethra is firmly compressed, and thus an expulsion of either fæces or urine prevented.

Now, that we have considered the gross anatomy and physiology of these parts in a healthy state, we can in very few words explain a few pathological conditions resulting from a deficiency of fat composing these supports.

Let us take, for example, a woman somewhat emaciated, or one whose peculiarities of constitution are unfavorable to the accumulation of fat, and we have the supports afforded by the region under consideration to a greater or less degree, and in many cases entirely wanting. The obturators, glutis, and adductors may contract, but the supports from the nates, ischio-rectal, and interfemoral regions are so deficient that they (the muscles) have nothing to act upon, and consequently the muscles forming part of the floor of the pelvis have the whole burden thrown upon them.

There may or may not have been a relaxation of the muscular system, but from the very fact that the pelvic muscles are continually exerting themselves, a lax condition must inevitably follow. Then comes the sensation of dragging and weight in the pelvis. Pain in the back and loins. Rectal and vesical irritation; great fatigue and weakness; leucorrhœa, and other signs of congestion; and later, after the muscles have lost their tone from the constant exertion, we have prolapsus, and the whole catalogue of displacements of the pelvic organs.

Another example of interest is afforded by a subject with a justo-major pelvis. There may be in this case a sufficient quantity of fat, and the muscular system in a state of perfect health, but that the support given by both will be to a great extent lessened will be readily perceived when we take into account the fact that the frequent concomitants of the abnormally capacious pelvis are very long necks to the femurs, giving great breadth to the hips, and carrying the shafts of the femurs, on a level with the perineum, very widely apart.

There is also a large outlet to the pelvis, with diverging rami of the pubes, separating the adductor muscles at their origin. Now, should there be sufficient fat to fill the space between the muscular portion of the thighs, it would be so heavy that, should the person attempt to walk or stand any length of time, the excessive weight would tire and drag down the muscles supporting it, and allow the pelvic organs to settle as previously described. In this way we account for many distressing sensations complained of by apparently healthy and robust women.

In consideration of the foregoing hurried and superficial elucidation of the subject, I trust that in future there may be some attention, at least, given to the support of the pelvic organs by—

First.—The interfemoral adipose pillars.

Second.—The fat of the ischio-rectal region.

Third.—The prominence of the nates.

Fourth.—The physiological thickening of the obturator internus muscles.

As regards the treatment of disorders accompanying

and resulting from a loss of these supports, much depends upon the attention given to the general system.

All pessaries, or artificial supports of any pattern, should be of sufficient size to compensate for the loss of tissue, and yet not large enough to cause pressure of such a degree as to prevent the reproduction of fat.

If possible, a support should be made of vulcanite (hard rubber), from a plaster of Paris cast taken of the vagina while distended, and as nearly as possible in a normal position. A support of this kind will fit accurately, and will consequently be sustained in position by a certain amount of atmospheric pressure.

In case of the justo-major pelvis, the patient will accomplish much by lying upon the back, and adducting the thighs against some power acting as an abductor; such as a spring hoop placed between the knees, or an elastic strap attached to either knee, and to the sides of the bedstead. *Don't apply these forces of abduction below the knees, or you will produce knockknee;* as I came very near doing in one case. By this manœuvre there is no weight brought upon the floor of the pelvis while the limbs are separated, and by the exercise to the adductor muscles they will become sufficiently powerful to sustain and control the interfemoral adipose pillars.

Very respectfully,

FRANK W. HAVILAND, M.D.,
Late Resident Surgeon Brooklyn City Hospital, Brooklyn, N. Y.
210 WEST 125TH STREET, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 8 to September 15, 1883.

BARTHOLF, JOHN H., Captain and Assistant Surgeon. Station changed from Fort Lapwai, I. T., to Vancouver Barracks, W. T. S. O. 123, par. 2, Department of the Columbia, September 6, 1883.

BANISTER, J. M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Adams, R. I. S. O. 170, par. 3, Department of the East, September 10, 1883.

Official List of Changes in the Medical Corps of the Navy for the week ending September 15, 1883.

BEARDSLEY, G. S., Surgeon. Detached from the Galena and placed on waiting orders.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Detached from the Galena and placed on waiting orders.

PERCY, H. T., Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and ordered to the U. S. S. Galena.

BRIGHT, GEORGE A., Surgeon. Detached from Naval Rendezvous at Philadelphia, Pa., on September 30th, and ordered to the Galena, October 1st.

URQUHART, R. A., Passed Assistant Surgeon. Ordered to the Alert on October 6th, and on the arrival of that vessel at Yokohama, Japan, to be detached and to report for duty at the Naval Hospital at that place.

SIMONS, M. H., Passed Assistant Surgeon. To be detached from the Naval Hospital, Yokohama, Japan, on the reporting of his relief, and ordered to the U. S. S. Alert.

TO PRESERVE SURGICAL INSTRUMENTS.—The following formula is recommended by Professor Olmstead, of Yale College. Melt together six to eight parts of lard to one of resin, and stir until it is cool; it can be thinned with coal-oil or benzine. Applied to a bright metallic surface it effectually protects the polish, but the surface should be both bright and dry, as it will not prevent the continuance of oxidation already begun.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 18, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 11, 1883.	0	83	36	3	60	21	0	0
September 18, 1883.....	0	69	38	3	22	19	0	0
Deaths.								
September 11, 1883.....	0	27	7	2	6	15	0	0
September 18, 1883.....	0	13	14	3	2	14	0	0

MEDICAL WOMEN FOR INDIA.—The *Indian Medical Gazette* thinks that the project, now being agitated in England, of sending out medical women to India is a visionary one, intended to meet a want which does not exist. Something practical is really being done in India, however. A philanthropic citizen of Bombay, Mr. Kittredge, has collected a sum of 26,975 rupees, and got the promise of 13,554 rupees more, for the purpose of paying the salary of one or two lady doctors who are intended to have a hospital and dispensary established for them in Bombay, and do their best to otbain practice among native ladies in that city. A wealthy Parsee gentleman has offered a lakh of rupees for the purpose of founding a hospital in connection with this movement, and a large and influential committee, representing every seetion of the community, has been organized for the purpose of promoting the objects in view.

A STANDARD OF QUALIFICATIONS FOR INSURANCE EXAMINERS.—The medical examiner of "the Catholic Knights of America" says that he will accept no credentials signed by any physician whose diploma is not recognized by the great universities of America. All others will be regarded as incompetent to conduct the examination of applicants to the ranks of these knights. The next question to be determined is, which are "the great universities of America?"

THE COUVREUSE, OR MECHANICAL NURSE.—*The Lancet* gives the following description of the ingenious contrivance known as the *couvreuse*, or artificial nurse. It was in 1878 that Dr. Tarnier, when visiting the apparatus devised by M. Odile Martin, for artificially hatching and rearing chickens at the Jardin d'Acclimatation, suggested that a similar method might be applied with advantage to infants, especially in cases of premature birth. Two years elapsed, however, before any attempt was made to carry out this proposal; but in the course of the year 1880 a *couvreuse* was made, and brought to the hospital of the Maternité. This is a plain wooden case or box, measuring about 2 ft. 8 in. by 2 ft. 4 in., and 2 ft. 4 in. in height. The box has a double covering, the space between being filled with sawdust to retain the heat, and is divided into two parts. The lower half contains a reservoir, which holds about sixty litres of water, and is fed by a patent boiler that stands outside the box, and is warmed by an oil-lamp; or hot water may be used without recourse to the lamp. The upper portion of the box forms a warm chamber, where a little basket or cradle is placed, large enough to hold two infants. From an opening at the side, this cradle may be withdrawn, while the top of the box has a double glass covering, so that the children and the thermometer lying by their side can be constantly

watched. If the water used in the first instance is cold, it takes a long time to attain the required temperature; but once this is done the lamp need only be relit three or four times during the course of the day. It is best to warm the apparatus while the infants are being fed or washed. The temperature within the *couvreuse* is generally maintained at 86° F., and though the contrast on withdrawing the child to be fed or washed is very great, amounting often to 30° F., colds are not so frequent as among the infants nursed in the ordinary manner. Altogether the experiment is considered so successful, that it is proposed to supply all the hospitals of France with a *couvreuse*, and there is every reason to anticipate good results from this measure. Nor is this all. A small portable *couvreuse* is now about to be tried, which could be carried by hand from house to house. After this we shall probably have perambulators constructed on the same model. Although no very careful experiments have been made with respect to the ventilation within the *couvreuse*, yet this is evidently sufficient. Apertures are made in the lower portion of the box, the fresh air travels over the hot-water reservoir, and is thus warmed before it reaches the child. The increased temperature within the *couvreuse* insures a constant current of air, though the child is protected by its cradle and clothes from any draught.

Oxaluria as a Cause of Spermatorrhœa.—Dr. W. H. Dickerman, of Olean, N. Y., sends us the following communication bearing upon the etiology of spermatorrhœa: "While there is a diversity of opinion as to the cause of spermatorrhœa and its local symptoms, it certainly must be conceded that there is an abnormal condition of the nervous system manifested in every such case. Crystals of oxalate of lime are invariably present in the urine of such persons, and as it is generally conceded that free oxalic acid in the circulation is poisonous to the brain and spinal cord, we have a possible cause which should not be overlooked. As an illustration of this condition, the following case is related. A patient, Mr. S. W——, aged twenty-nine, presented himself for treatment about one year ago. He had been laboring under great mental weakness for several months, and complained of a dull pain and a sense of uneasiness in the occipital region. He said he had frequent nocturnal seminal emissions. There was great irritability of the neck of the bladder, and frequent micturitions day and night. The passage of a sound revealed hyperæsthesia along the prostatic portion of the urethra and at the neck of the bladder. He denied ever having practised masturbation or indulged in excessive venery. He was greatly emaciated. The urine contained in suspension a milky, tenacious, gelatinous substance, and upon microscopical examination many spermatozoa were discovered. Crystals of oxalate of lime were present in abundance. Taking into consideration that in the oxalate of lime diathesis (oxaluria) there is a chronic poisoning of the brain and spinal cord, due to minute particles of oxalic acid in the circulation, I regarded the spermatorrhœa as of only secondary importance, and put the patient upon dilute muriatic acid treatment. In two weeks he returned and said he was well. An examination of his urine confirmed his statement, and he has not been troubled since. As a cure resulted under the acid treatment in so short a time, I was forced to believe that in this case there was no other cause than the oxaluria."

Otitis Media Purulentia and Mastoid Complications.—Dr. M. E. Alderson, of Russellville, Ky., calls attention to certain cases, primarily of headache and acute pain in the ear, accompanied by discharges, which, as he justly states, do not always receive the necessary careful examination, but are too often dismissed with a few general directions, and thus, after a time, result in serious consequences. In treating these cases, the usual plan by injections of astringent and sedative solutions he considers to be insufficient. Regarding the radical treatment by trephine, aside from the shock involved, especially in delicate subjects, he finds the results from this procedure by no means certain. The following conservative method is recommended by him, exemplified by the accompanying case: Mrs. ——, aged thirty-three, has complained of headache for the past three years, which has become more persistent, until finally recurring every two or three days, and with increased severity. Has been treated for nervous headache by several physicians, and with only temporary relief. Purulent inflammation of both ears had existed for some time, and the external meatus was now covered with layers of thick pus, causing considerable distention and thus adding to the intensity of the pain, which was present on both sides of the head and face, more especially over the mastoid cells. After thorough cleansing with the probe and absorbent cotton, there was discovered by the speculum granulating mucous membrane and fleshy-looking membrano tympani. No polypi existed, and the hearing of both ears was good. For the pain, which was very acute and neuralgic in character, a mixture of aconite and gelsemium was ordered—a few drops q. 4 h. Locally, the entire external canal was packed with powdered boracic acid, previously mixed with calendula and carbolic acid, and thoroughly dried, the whole then being covered with absorbent cotton. This was allowed to remain for three days. The packing was then removed, the canal carefully dried, and the application renewed. To the mastoid process a fly blister was also applied once a week and kept discharging freely. Under this treatment amelioration of all the symptoms followed, and the final results were entirely satisfactory.

Filth Diseases in Rural Districts.—Dr. A. L. Carroll, of New Brighton, N. Y., writes: "Sir: On my return from Europe, my attention has just been drawn to a paper by Dr. George Hamilton, published in your issue of July 28th, commenting upon an article of mine on 'Filth Diseases in Rural Districts.' I have apparently been so unfortunate as to fail to make myself understood by Dr. Hamilton, or even to attract his careful reading; for I cannot discover in my own article the words which he places in quotation marks, nor do I think that many of my statements legitimately bear the interpretation which he gives them. I have no desire, however, to enter upon a controversy touching the etiological researches which abound in English sanitary literature, or the occasional difficulties of diagnosis which all vital statisticians and registrars deplore. My only present object is to clear myself from the totally unwarranted imputation of making a 'thrust at the country physicians.' If Dr. Hamilton will honor me by again referring to my article, he will see that I made the more comprehensive statement that 'very few physicians in *this* country' have cared to learn the methods of sanitary inspection; and the context will show him that the fault is imputed to our medical schools, most of which utterly ignore the teaching of hygiene, and graduate family practitioners well qualified, it may be, to treat disease after it has arisen, but without instruction how to detect the insanitary conditions under which their patients may be living."

The Championship of America in Tonsil-Cutting does not belong to Indiana, says Dr. Tauber, of Cincinnati, O., but to New York. It was stated to me that Dr. Lewis Elsberg, of New York, has excised more than 11,000 tonsils; this would be, according to Dr. William's calculation, over two and one-half bushels.

Two Cases of Absinthe Poisoning.—Dr. Albert S. Adler, of Lordsburg, N. M., writes: "A few nights ago I was called upon to attend two individuals who had been drinking heavily, and were now in convulsions. Hastening to their place of abode I found that one of the patients, a woman, in an epileptiform convulsion—uncon-

scious, small pupils, and frequent and small pulse. The other was also unconscious, but not then in spasms. All questions in regard to poisoning were altogether refuted by the other inmates of the house. I was about to resort to some stronger means in order to relieve their sufferings, when the young girl, returning suddenly to complete consciousness, claimed that she and her male friend had partaken of over a quart of some alcoholic liqueur, the principal part of which was absinthium. The epileptic convulsions had commenced half an hour prior to my arrival, and, as before stated, lasted in the girl but a short time during my presence; they had been more vehement and frequent in her because she had taken a larger quantity. The man was restored to his senses by slapping his face with wet towels. These cases of epilepsy are of more frequent occurrence than generally supposed. Magnan ('De l'alcoolism, des divers forms, du delire alcoolique,' etc, Paris, 1874, and 'Annal. Médic. Psych.,' 1874, p. 302), was the first to describe the danger of absinthe drinking. His experiments on animals, as well as observations on man, have demonstrated that it was not the alcohol which brought forth the spasms, but that the absinthium was the source of the vehement symptoms. Alcohol occasions delirium and tremor, absinthium these two and epilepsy in acute alcoholism. Small doses of wormwood given to animals have the effect of producing tremor of the muscular system, dizziness, and in a surprising manner upstarts of individual muscles, in larger doses a complete formed epilepsy. In man, besides the alcoholic delirium, epilepsy is noticed. Among three hundred and seventy-seven persons addicted to the use of alcohol, Magnan found, in 1870, but thirty-one epileptic cases, and in 1871, among two hundred and ninety-one, only fifteen. In France it is regarded by the legal authorities as a poison, and only allowed to be sold in drug-shops. Magnan comes to the conclusion that if epileptic attacks happen in acute alcoholic-poisoning, it was only in absinthe drinkers, and that acute alcoholism without epilepsy, but with tremor of any degree, was but seen in persons partaking freely of wine or whiskey."

A NEW BOARD OF HEALTH has been appointed by the city council of Cincinnati, O. There are six members. Five are saloon-keepers, and the sixth is a so-called doctor, a frequent patron of the saloons, advertises to cure the opium habit, restore lost virility, etc. The Cincinnati *Lancet* is unable to see why so much medical wisdom was injected into the board.

TWO CASES OF ANEURISM EXHIBITING UNUSUAL PHYSICAL SIGNS.—Dr. W. S. Cheesman, of Auburn, N. Y., sends us the following: "While an *interne* in Bellevue Hospital, I had under observation, for some three months, a case whose history was as follows: Patient, a man, aged forty-nine, well muscled, and apparently hearty. Contracted syphilis in 1865. In October, 1878, he strained his back while lifting, but recovered. About three months later he over-indulged in liquor, etc., and pain in the back shooting around the abdomen and down the thigh commenced, and in a day or two he observed a pulsation in the abdomen. All these symptoms persisted. About a year later he detected a swelling behind the episternal notch, which caused pain and dyspnœa. He soon suffered from dizziness, pain in the head, flashes before the eyes, and some difficulty in swallowing. As will be at once supposed, these sets of symptoms had separate causes. Repeated physical examinations made it almost certain that the patient had two aneurisms, one of the lower thoracic or upper abdominal aorta, the other of the innominate, each giving rise to its own physical signs. The aneurism of the trunk imparted an irresistible heaving impulse to the lower part of the left chest, over which area a low, blowing murmur was heard. The aneurism of the neck was palpably evident behind the right sterno-clavicular articulation as a pulsatile tumor, over which a blowing sound was heard loudly. It gave rise to much inspiratory stridor, a pressure-effect purely, the laryngoscope revealing nothing abnormal to account for it. An occasional cough had the aneurismal note, but the voice was natural. A curious pulsation was occasionally communicated to the larynx and the tongue. Every now and then the thyroid cartilage would rise and fall synchronously with the pulse of the aneurism, and when at these times the patient opened his mouth, the tongue was seen to pulsate backward and forward. How this motion was imparted to these organs was never ascertained. On auscultation of any part of the chest, one could hear a loud ronchus during expiration, which ronchus intermitted, the intermissions corresponding to the cardiac diastole. It was supposed that pressure on the trachea or a bronchus was made by one of the aneurisms, that this pressure was increased by the contraction of the thoracic cavity during expiration, and that the calibre of the air-tube was so much lessened at the acme of the aneurismal expansion, that a momentary ronchus was then produced. The patient improved, and was finally discharged at his own request. He re-entered hospital four months later, remaining a week. The physical signs were unchanged.

"On June 30, 1883, a laborer, aged forty-three, applied to me for relief of a hoarseness of three months' standing. He was nearly aphonic, and there was much dyspnœa. The laryngoscope showed the left vocal chord paralyzed in abduction. The right chord crossing the middle line in attempts at phonation occasionally met its fellow, and sound resulted. Looking down the trachea, there was distinctly apparent, near its bifurcation, a pulsation which narrowed the lumen of the tube, and at the same time moved it somewhat from left to right. Over the upper sternal region a small area of dulness was made out, and here a double blowing murmur could be heard The heart was displaced downward and to the left. A thrill was felt in the subclavians. The cough was markedly aneurismal. No history of syphilis or strain. Aneurism of the arch compressing the trachea was diagnosticated, and a gloomy prognosis given. Both opinions were verified about a month later by the patient's dying suddenly in the night with a tremendous hemorrhage. I regret that in my absence from the city no post-mortem was made. The physical signs which gave these cases their interest, and which I have not hitherto seen described, were: 1st, the pulsation upward of larynx and tongue; 2d, the intermitting ronchus in Case I.; and 3d, the pulsation observed near the bifurcation of the trachea in Case II."

IMPURITIES AND ORGANISMS IN THE AIR OF THE COMPRESSED AIR-CHAMBER.—In a communication addressed to THE RECORD, Dr. Arthur J. Wolff, of 66 Capitol Avenue, Hartford, Conn., late A. A. Surgeon, U. S. A., calls the attention of all who have occasion to use compressed air for the propulsion of various substances into the air-passages, to the danger thereby incurred of forcing disease germs into those organs. He states on the strength of experiments recently conducted by him that: 1. By the use of the compressed air-chamber, as at present constructed, we cannot avoid the access of impure air to the throat and air-passages. 2. The confined air-space affords the most propitious conditions for an enormous increase of the various spores, bacteria, fungi, etc., contained in the air of the room from which the supply is derived. 3. The mere mixture of this air for a short time with any solution that may be used in the spray apparatus, even having the most perfect antiseptic qualities or being in itself eminently a microbicide, is insufficient to sterilize it. 4. The use of this air is in itself, in certain cases, effective in producing an increase of the throat trouble. The author demonstrated the existence in the air-chamber of carbonic acid and chlorine in large quantities, when the air from a room in which these gases had been liberated was pumped into the receiver. The presence of micro-organisms was deter-

mined by the following experiment: Having brought the pressure in the condenser to indicate thirty-five pounds, he slowly passed the air through a series of three bottles, the sides and bottoms of which were smeared with glycerine. The glycerine being then removed and placed under the microscope, the presence was discovered of a great number of spores of cryptogams, bacilli, bacteria, micrococci, pollen of certain plants, indeterminate masses, and mineral particles. He discovered one variety of microbe in particular, about $\frac{1}{6800}$th of an inch in length, which resembled the bacillus tuberculosis very closely in appearance and in the peculiarity of staining. The author proposes in subsequent experiments, by isolation and cultivation according to Koch's method, to determine the question of the identity of this bacillus with that which the modern theory recognizes as the cause of tuberculosis. He showed by further tests that the air was not purified by passing through the supply tube containing various antiseptic solutions, such as iodine, mercuric chloride, zinc chloride, quinine, etc. Dr. Wolff concludes with a description of the method employed by him to sterilize the air before it passes into the condenser. He passes it through a series of **U**-tubes filled with fine iron wire heated to redness. It is subsequently conducted through a bulb, loosely packed with absorbent cotton saturated with a solution of corrosive sublimate (1–500), and is then ready for use. The large measure of success which he has met with in the treatment of diseases of the respiratory organs he attributes in great part to the precautions taken to force only purified air into the air-passages. It is his desire to present these facts to the profession in order that they may receive thoughtful consideration, and that others may be led to adopt greater precautions to guard their patients from the probable dangers of the compressed air apparatus.

The American Medical College Association.—The *Southern Practitioner* reports the death at Nashville, Tenn., on the 20th ult., of the American Medical College Association. It announces the cause of death as "The Bellevue Stab." This reference is, evidently, to the famous advance and precipitate retreat of Bellevue Hospital Medical College, a couple of years ago, on the question of an advanced standard of medical education. Bellevue was loud in her demands for a higher standard, and in the fulness of time went up to possess the land. But she soon discovered that she had been too previous, as it were. She is of "the-old-flag-and-an-appropriation" style of patriot, and was loud for advance as long as the cry seemed popular and was likely to draw students. When, however, the students refused to follow, she quickly sounded the retreat, and thus, as our contemporary intimates, gave the death-blow to the movement to improve medical education in this country. But it is cruel to open these old sores, and more especially at this time, when Bellevue is so faithful to the Code of Ethics. Her new announcement flies the ethical colors on her mast. How long, in the light of past experience, will they thus ostentatiously fly? The size of her next year's class may have an effect in determining the answer to this question.—*Medical Age.*

Longevity in the Different States.—A student of the reports of the tenth census has compiled a table for the Boston *Commonwealth* for the purpose of showing in what State or States one has the best chance for a long life. New Hampshire seems to him to be the favorite refuge of green old age, for he finds that one-seventy-fourth of the inhabitants are at least eighty years old. The proportion among native white males is 1 in 80, but the environment in New Hampshire seems to have been even more favorable to the preservation of life in the other sex, for the proportion among native white females is 1 in 58. Other New England States do not contain quite so many old persons, the average proportion for the six being 1 in 134. Coming to New York, he finds that for one person who has reached the age of eighty there are 161 who have not been so fortunate, and in the three Middle States the average proportion is 1 in 182. As he goes southward he discovers a greater preponderance of young blood, for in six South Atlantic States the average proportion is 1 in 203. The Gulf States afford a less attractive shelter for the aged, for the average is 1 in 300. In Texas, where so many worthy persons die with their boots on in the prime of life, only one octogenarian can be found in a group of 497 citizens. The average rises again in the interior States east of the Mississippi, but in the great lake States it falls to 1 in 263, a good old age being attained with the greatest difficulty in the wealthy and prosperous State of Illinois. In seven States west of the Mississippi River the aged rarely appear, for the average proportion is 1 in 453. In Iowa a crop of 334 persons yields only one who has reached the age of fourscore; in Minnesota, Nebraska, and Kansas only one of these aged citizens can be found in a group that would yield two in Iowa, and in Colorado 1,150 inhabitants must pass in review before an octogenarian comes in sight. The old are even more rare in Nevada, but in California and Oregon the proportion is nearly 1 in 500. If the inhabitants of the whole country could be assembled in two hundred and twenty-seven groups, it would be possible to place at the head of each group one patriarch of eighty or more years. So our student, assuming that long life is the inalienable right of those who reside in New Hampshire, Vermont, and Maine, cries: "Flee to the mountains of New England for health and longevity!"

Italian English.—The proprietor of the Hotel de Bellevue at Pompeii, as a means of attracting English custom to his house, has issued an advertisement couched in the following extraordinary terms: "That hotel open since a few days is renowned for cleanness of apartments and linen, for exactness of service and for excellence of the true French cookery. Being situated at proximity with regeneration, it will be propitious to receive families whatever which shall desire to reside alternately into this town to visit the monuments newly found and to breathe thither the salubrity of the air. The establishment will avail to all the travellers visitors of that sepult city and to the visitors (willing to draw antiquities) a great disorder and expensive contour of the Iron-whay. People will find equally thither complete assortment of strange wines, and of the kingdom, hotel and cold baths, stables, and coach-houses, the whole with very moderate prices. Now all the application and endeavors of the host will tend always to correspond to the taste and desires of their customers, which will acquire without doubt to him into that town the reputation whom he is ambitious."—*The Caterer*, London.

To Disinfect Water for Hypodermic Use.—A sure but, so far as we are aware, little practised method for disinfecting water for hypodermic use is to boil it. It is not sufficient that the water be boiled when the hypodermic solution is made for the case bottle; it should be boiled on the spot. The requisite amount is put into a teaspoon, a lighted match is held under it, and the fluid injected while warm. If the practitioner prefers, as many do, to make the solution p.r.n., the required amount of the drug or a pellet may be placed in the spoon, reduced to a powder—better still placed in the water and reduced—and the heat applied, the increased temperature favoring the solution. In this manner bisulphate of quinine may be used without any acidulous accessory, and without the unpleasant effects so often seen after hypodermics of quinine.

Oil of Wintergreen (salicylate of methyl) diluted with an equal quantity of olive oil or soap liniment, applied externally to the joints affected by acute rheumatism, gives prompt relief, and, from its pleasant odor, is very agreeable to use.—*The Quarterly Therapeutic Review.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 13 NEW YORK, SEPTEMBER 29, 1883 Whole No. 673

Original Articles.

THE RECOGNITION OF CEREBRAL COMPLICATION IN AURAL AFFECTIONS, BY MEANS OF THE OPHTHALMOSCOPE.[1]

BY J. A. ANDREWS, M.D.,
NEW YORK.

CASE I.—*Otitis media purulenta chronica; abscess of middle lobe of cerebrum; death.*—G. J——, house painter, aged twenty-four, had scarlet fever when twelve years old, since which time he has had more or less purulent discharge from his ears. While descending a ladder, December 18, 1878, pain developed suddenly in his right ear and corresponding side of the head. On reaching home, he went to bed; during the night he vomited; he thought it was an attack of fever and ague. Next morning he was dizzy and vomited. Took gr. xv. of quinine in the morning; at noon he felt worse and sent for his physician, who prescribed Kalium brom. for the head symptoms, and ox. cerium for the vomiting; in the evening of the same day the doctor's attention was attracted to the patient's ears, because of pain referred to depth of right ear. Temperature, 103°; pulse, 100; resp., 30 per minute. I saw patient three days subsequently: he was conscious and talked intelligently. H. D. R. E., watch ad concham; acumeter, 1″; L. E., watch ad concham; acumeter, 4″; quite deaf for conversation. R. E., slight purulent discharge; drum membrane has a small perforation in its antero-inferior part; calibre of external auditory canal much lessened in consequence of swelling of its lining tissues. L. E., no discharge; no evidence of active disease in this ear. *Double optic neuritis.* R. E., counts fingers at six feet; L. E. V., $\frac{20}{70}$. December 24th, saw patient at 9 P.M.; two hours previous to my visit his condition had assumed a marked change; the pain in the right side of the head was intense; he vomited; temperature, 101°; pulse, 110 and very feeble; he was drowsy, and passed his urine involuntarily; easily roused from drowsy state, when he conversed rationally. December 25th, 2 P.M., patient died in coma. No paralysis, no convulsions.

Autopsy.—Right external auditory canal filled with healthy-looking pus. Extending from the tympanic portion of the Gasserian fissure outward into the external auditory canal for four mm. but not involving the ossicles, the bone was ulcerated. The communication with the brain was made at the point of ulceration just referred to, this being effected through a small fissure in the centre of the ulcerated bone. The dura mater overlying the ulcerated bone was also ulcerated and separated from the bone by offensive-smelling pus; pia mater congested and numerous ecchymotic foci; the middle and anterior fossæ contained pus; brain normal in consistence. Encysted abscess in middle lobe of cerebrum; brain surrounding abscess œdematous; sinuses and internal ear normal. These conditions refer to the right side of the brain. The left temporal bone was not dissected, but there were no changes in the meninges overlying the temporal bone on this side.

Patient's mother informed me that two years after the scarlet fever he took cold in his ear and suffered a great deal with his head. He had headache at times for several years. Inasmuch as the abscess was encapsuled, and death occurred a few days after the development of cerebral symptoms, we may justly refer the interval of ten years between the attack referred to by his mother and December 18, 1878, as the period of latency.

The above case is an exception to the law which Toynbee endeavored to establish, *i.e.*, that each of the centres of the ear had its peculiar division of encephalon to which it communicated disease: inflammation of the meatus audi. ext. extending to the lateral sinus and cerebellum.

CASE II.—*Otitis media purulenta chronica; optic neuritis; phlebitis sinus lateralis dextra; meningitis of convexity; death.*—P. H——, aged forty-two, clerk, had had purulent discharge from both ears for eight years, which had never been treated. Three years ago there appears to have been an acute exacerbation and he was treated for inflammation of the brain, but the ears received no attention. Since this attack, patient states that he has enjoyed good health, but, on close questioning, I elicited the fact that for some time after the acute exacerbation referred to, he had headache, which was generally so slight that he did not think it was "significant." July 5, 1879, I was requested to see him. He had been confined to the house for two weeks, during which time he had been very irritable, and had severe pains in the head; the headache was diffused, and at times referred to the right side of the head. There had been no paralysis, nor convulsions, but he vomited during first week of his present trouble. For the first two days he had illusions and delirium; temperature had not been above 100.5° F. On occasion of my first visit I found patient suffering with severe diffuse pain in the head; purulent discharge from right ear; discharge very offensive; removal of the discharge revealed bottom of the canal filled with granulation tissue; right optic neuritis; left disk hazy, veins large and dark-colored, but not tortuous. R. V. = $\frac{20}{100}$; L. V. = $\frac{20}{70}$. Intensely sensitive induration extending in course of right internal jugular vein.

July 6th.—Swelling of the neck very marked; face puffy. Right processus mastoideus not sensitive to the touch, but patient was rendered dizzy and confused by a light tap on this part. Chills four times during day.

July 7th.—The right mastoid was entered, no pus found, but there was a sharp hemorrhage which stopped spontaneously. He expressed himself as relieved by the operation and slept for three consecutive hours after it.

July 8th.—Puffiness of the face much diminished; temperature at 9 A.M., 101.3° F.; pulse, 95; respiration, 20 per minute. 2 P.M.: temperature, 103° F.; pulse, 95; respiration, 26 per minute. 9 P.M.: temperature, 104.2° F.; pulse, 110; respiration, 32 per minute.

July 9th.—Suddenly he became unconscious, and death occurred in coma. No convulsions.

Autopsy.—All the sinuses contained some fluid blood; right superior petrosal and lateral sinuses contained red coagula, loose in superior petrosal but adherent in lateral sinus. The venous wall of lateral sinus on right side is thickened, its surface brown in color and the bony wall separating the sinus from the mastoid cells is ulcerated at three different points at which offensive smelling pus was seen between venous and perforated osseous wall. Right internal jugular vein contained a disintegrated thrombus. The tegmen tympani was very thick. The dura mater covering tegmen tympani and the adjacent portion of bone on right side was deeply congested, and

[1] Read before the American Otological Society, July 17, 1883.

numerous small red points (hemorrhages) were seen. This condition was confined to the parts just mentioned and was not evident in any other part of the dura mater. Subarachnoid space and meshes of pia mater covering convexity of cerebral hemispheres and upper surface of cerebellum contains a moderate amount of sero-purulent exudation; the exudation extended down sides of brain and most abundant on right side, but at the base of the brain it was less abundant. The mucous membrane of tympanic cavity was swollen, tumefaction extending into the mastoid cells.

CASE III.—*Otitis media purulenta chronica; meningitis, optic neuritis; recovery.*—J. E——, aged nineteen, has had purulent discharge from left ear for eighteen months. Short and stout in stature, strumous scars on face directly in front of left ear, also on neck of corresponding side. Right ear has never discharged. He had never been under treatment for his ear trouble. The discharge from the ear has been profuse until about a week ago, since which time it has been scanty. I saw the patient November 16, 1880, six days after the development of threatening symptoms. The left ear contains a large polypus springing from the superior surface of the external auditory canal, at about the junction of its cartilaginous and bony portions. Removal of the polypus, which was very vascular and had a broad attachment, showed the bone beneath to be exposed and rough. There were also two polyps springing from the tympanic cavity; these had such a slender pedicle that they came away while the snare was being applied. Their removal revealed pulsation at the bottom of the canal, and after repeated efforts with the catheter pus was blown through the perforation in the membrana corresponding to the point where the pulsation was noted, but, owing to the swelling of the canal, the perforation could not be seen.

Pharynx very much congested, and secreting thick mucus. Left membrana tympani was incised, considerable pus coming away, much more than was expected from the appearance of the drum membrane, which did not appear bulged forward in any part that was visible. Mastoid process red and painful. Severe headache; the pain was general, but at times it was most severe on left side of head and in forehead. Temperature 101° F.; pulse, 85 per minute. He was very restless; he vomited half an hour before I visited him. He complained of not seeing a certain picture on the wall. Left eye, marked optic neuritis; right eye, retinal veins enlarged but not tortuous, disk very red but not œdematous; no other change in fundus.

An incision over left mastoid showed the bone to be inflamed but firm. No improvement followed this operation, and thirty-six hours subsequently the mastoid was bored into; a small amount of blood, with a trace of pus, escaped from the opening. The cortical plate of the mastoid was very thick. A warm solution of kalium permanganatis injected into the external auditory meatus readily escaped through the opening in the mastoid, which passage I kept free by means of a drainage-tube. There could be no doubt in regard to the immediate result of the operation. He recovered from the influence of the ether rapidly, and in half an hour afterward fell into a quiet sleep which lasted for nearly four hours. On awakening there was less headache, and patient asked for some warm milk, of which he partook with relish.

November 18th.—Patient passed a quiet night; his sleep was interrupted, but he did not suffer from pain in the head. Temperature, 100° F.; pulse, 80 per minute. There is a free discharge from mastoid. I did not examine patient's eyes the morning following the opening of the mastoid, but I did so on the morning of the fourth day after the operation. The left disk was less œdematous and the veins less full and not so dark looking, but the improvement was not striking.

December 6th.—Patient has been steadily improving; there is only occasional headache, and then very slight. There is a marked change in the appearance of the left optic disk; it is only slightly obscured, but the retinal veins are still fuller than normal. The right disk is now swollen and the veins are large and tortuous.

Patient passed from my care in February, 1881, about two months and a half after the beginning of the trouble. The left optic disk was then hyperæmic, the veins much less in size than when seen two weeks previously; the opening in the mastoid was closed. There was still a slight discharge from the ear. Right nerve is still somewhat obscured, but its improvement is very manifest. The patient was absent from New York until May 2d. I saw him on the 4th; the discharge had ceased since March. The left optic disk appears normal (?), the right disk is slightly hyperæmic. R. E. V. = $\frac{20}{30}$; no improvement with glasses; L. E. V. = $\frac{20}{30}$; right visual field normal; left visual field slightly contracted.

I have intentionally omitted many of the details of this case, and record only what I considered the essential features. The diagnosis of cerebral complication was believed to be confirmed by the ophthalmoscopic examination. I saw the patient for the last time in December, 1881. At that time there was, I thought, no abnormal change in either fundus, but the visual field of the left eye, therefore, on the same side as the ear affected, was slightly contracted.

CASE IV.—*Otitis media purulenta chronica; abscess of the brain; death.*—In the early part of the summer of 1879, Mrs. K——, aged thirty-one, consulted me on account of distressing subjective noises in her right ear, and difficulty of hearing. At the bottom of the right external auditory canal were two medium-sized polypi; immediately in front of these growths the posterior and superior surfaces of the canal were ulcerated for a considerable extent outward. The left drum membrane presented the appearance of having been the seat of a perforation. She stated that she had had a purulent discharge from the right ear for about thirteen years; there had been a discharge from the left ear, but this had ceased spontaneously after a few weeks' duration. She suffered pain at times in the right ear. I advised the removal of the polypi; but when she was told that the discharge from the ear would not stop so long as the growths were allowed to remain, she seemed rather agreeably surprised, and said: "Why I have always been told that it was not right to stop a running ear." She further told me that during the past winter she had lost her young son, then living in New Jersey, who was said to have died of inflammation of the brain. I asked if he had had any ear trouble, and she replied, "Only a running." This had followed scarlet fever and had, at the time of his death, existed nearly two years. "But," she said, "I was advised to let it alone." In regard to her son's condition just before death, I elicited the following: "The boy complained of pain in his head [ear?] for several weeks before his death; he was unconscious for three days before he died; a blister was applied behind his ear, but this part [mastoid?] was so sore that poultices were ordered." This case seems plainly to have been one of middle-ear disease, terminating fatally from extension to the brain.

Mrs. K—— consented to the removal of the polypi, and this was followed by quite active inflammatory reaction, which, however, was promptly subdued by local depletion, etc. There were no visible changes in the optic nerve. After eight days' treatment she went to Chicago; I therefore lost sight of her until soon after her return, in November, 1879.

December 2d I was requested to see her. On her way from Chicago, three weeks before, she took a severe cold; she had had almost constant pain in the head for upward of two months, especially severe for the past five days, and was referred to the right side of the head. Facial paralysis had occurred on the right side, and there was vertigo. I found her suffering violent pain in the right side of the head and at the depth of the right external auditory canal; offensive purulent discharge es-

caped from the right ear. Vomiting; temperature, 102.8° F.; pulse, 95. Mastoid not tender on pressure, nor does percussion cause vertigo or pain. There is beautifully developed neuro-retinitis in right eye; no changes in left eye; counts fingers at about ten feet with right eye.

5th.—Patient is delirious.

7th.—Patient comatose; no convulsions. She died after having lain in coma for six hours.

Autopsy.—Corresponding to the point of ulceration in the external auditory canal, referred to above, a sinus was found extending into the antrum mastoideum. The roof of this cavity was destroyed by caries; pus to the amount of half a fluid ounce lay upon the carious bone. The dura mater overlying this collection of pus was very much thickened, but not perforated. In the right hemisphere of the brain a large abscess was found, filled with greenish thick pus; the surrounding brain substance was œdematous, but not disorganized; the abscess was encapsuled, but had ruptured into the brain, in all probability only a short time before death. The sinuses contained dark-colored blood, but no clots. The right lateral sinus was unchanged.

The foregoing cases have been presented, not because they exhibit any remarkable or unusual features that have not already received notice in literature, but they are offered more with the intention of eliciting discussion on a subject bearing upon which the writer does not find much satisfactory data in literature.

The cases of cerebral abscess tabulated by Gull, Rudolph Meyer, Wreden, Lebert, and others, furnish no facts which enable us to judge of the frequency or actual presence of signs of intra-cranial disease by the appearance of the fundus oculi. In the majority of instances in which reported cases of cerebral diseases, secondary to an aural affection, appear in literature, the eye is merely incidentally alluded to, *i.e.*, the state of the pupils, the presence of photophobia, or the condition of the sight. In many instances the question of an intra-ocular lesion was dismissed with the observation that the vision was $\frac{20}{20}$. The writer believes that most ophthalmologists will endorse the statement that optic neuritis and central vision $\frac{20}{20}$ are not incompatible. I have seen such cases, and I have now under my notice the case of a physician with advanced atrophy of the optic nerve, and central vision $\frac{20}{20}$, but whose visual field is very much contracted. Then again, when the ophthalmoscope has been used, the record reads: "One or both optic disks appeared obscured and the vessels enlarged." Now the writer believes that it is just such cases that should excite our suspicion of an intra-cranial complication in ear disease—especially purulent otitis media—in which other signs of extension of the trouble to the brain are obscure.

To what extent, in the cases under consideration, an *œdema* of the *optic disk* should influence our mode of treatment in regard to an operation upon the mastoid is, in the absence of sufficient evidence, necessarily an open question; but from a careful study of cases in which the mastoid has been opened, the operation does not appear to be a dangerous one when intelligently performed; and the writer would, without waiting for pronounced neuritis, accept the condition of the œdema of the optic disk in the cases under discussion as an indication for opening the mastoid; and if not with the expectation of liberating pus, at least to establish free drainage from the middle ear. The procedure is certainly consistent with a good surgical principle and is not likely to add to the pre-existing mischief.

Not until quite recently has attention been directed to the importance of examining the fundus oculi in aural affections. Allbutt, Kipp, Knapp, and Zaufal are the pioneers in this valuable work of furnishing evidence of the importance of an ophthalmoscopic examination in the class of cases under consideration. Allbutt[1] and Kipp[2] have each reported two cases of otitis media purulenta with optic neuritis, in which recovery took place, and Zaufal[1] has also recently recorded a case of a student, sixteen years of age, with purulent otitis media, and optic neuritis, which latter condition was observed to rapidly recede after trepanation of the mastoid, and the patient made a good recovery.

Acute otitis media does not commonly prove fatal; the pain in and about the ear often being so intense as to almost completely obscure the symptoms of any brain complication which may exist. The patient generally recovers from the acute symptoms, and there may remain impaired hearing and a purulent discharge from the ear, which latter may continue, if not treated, for weeks and months, and even years, when an acute exacerbation occurs, and the patient dies with the post-mortem evidence of abscess of the brain; the abscess, in many instances, having been formed at the time of the first attack of ear trouble, some years previously. This was evidently the fact in Case I., cited above; however, this is not an isolated case. Otological literature abounds with records of cases of cerebral abscess, which exhibited a long period of latency. In acute abscess there is, as a rule, little or no period of latency, and the disease ends fatally in a few days, the abscess in such cases not being encapsuled. Meyer[3] states that the earliest appearance of a capsule is at six or seven weeks, and Huguenin demonstrated distinct evidence of the capsule not earlier than twelve weeks. The chronic abscess is characterized by a prolonged period of latency, which intervenes between the early congestive stage and that of the development of the purulent formation. Often the latency is interrupted by a slight degree of headache, which symptom obtained in Case I., and is often confounded with digestive disorders, and escapes scrutiny on that account. The duration of the latency varies from a few weeks to several months.

As far as I have been able to ascertain, the longest attested duration of brain abscess is that case observed by Härlin,[3] in which the traumatism occurred twenty-six years before death. In another case, reported by E. Schott,[4] abscess of the brain followed an injury sustained twenty-one years before. In the first case cited in this paper the abscess had, in all probability, existed ten years. The period of latency once being disturbed, the end of the disease is soon reached. Headache was the initial symptom in two-thirds of Meyer's cases of abscess of the brain, therefore somewhat more frequent than in brain tumors, where, according to Ladame,[5] it ushered in the phenomena of the disease in one-third of the cases.

The intensity of the headache varies greatly: in one case it is almost unnoticeable, in others it excites excessive complaint by the patient. Generally it increases with the duration of the disease, and is more continuous and occurs less in paroxysms than the headache of brain-tumors. The headache is sometimes accompanied with fever, but this is very often absent, even in the terminal stage. A case reported by R. Deutschmann, in a recent number of Graefe's *Arch. für Oph.* (Bd. xix., Abth. i., 1883, p. 292), is a striking illustration of this fact. The case was one of abscess of cerebrum with choked disk; meningitis basilaris and perineuritis, also neuritis interstitialis optica, but at no time elevation of temperature. We find vertigo, and less frequently vomiting, and seldom convulsions or paralysis. It is a significant fact in connection with cerebral localization, that *the principal seat of abscess of the brain, secondary to ear disease, is in the medullary substance, seldom in the cortex;* which fact may account for the absence of certain nervous phenomena in these cases.

In regard to the clinical phenomena of *thrombosis of*

[1] Thomas C. Allbutt: On the Use of the Ophthalmoscope in Disease of the Nervous System and of the Kidneys, etc., pp. 322, 323, 324.
[2] Archives of Ophthalmology, vol. viii., pp. 75 and 148.

[1] Wiener Med. Presse, 1881, No. 46, p. 1452.
[2] Zur Pathologie des Hirnabscesses, Inaug. Diss. Zürich.
[3] Quoted by Bruns, Handbuch der Chirurgie.
[4] Ueber Gehirnabscess. Würzburger med. Zeitschr., ii., p. 462.
[5] Symptomatologie und Diagnostic der Hirngeschwülste, Meyer, op. cit.

the transverse sinus, the symptoms of a painful œdema over the mastoid of the affected side, to which attention was first directed by Griesinger, *is* of diagnostic value. Schwartze (Arch. für Ohrenheilkunde, vi., p. 219) considers this symptom unreliable, but Wreden confirms the œdematous swelling in the region mentioned as a symptom of phlebitis of the lateral sinus, and the cases reported by Rammel, Kolb, Taylor, Moos, J. Orne Green, and others, support Griesinger's view. However, this symptom is not a constant one.

Phlebitis of the cavernous sinus declares itself by a congestion of the vein which empties into it, the ophthalmic, and its branches. As the result of this congestion there is œdema of the eyelid, conjunctiva, forehead, and nasal mucous membrane, entoptic phenomena, and diminution of sight (Wreden[1]). These symptoms may, in the beginning of the disease, exist on one side only, but this will only be for a short time, since the disease soon spreads to the corresponding sinus of the opposite side. Congestive papilla alone would not necessarily furnish us with positive evidence of the *locality* of the obstruction since Sesemann[2] has shown that the superior and inferior ophthalmic veins do not empty the largest quantity of their blood into the cavernous sinus, but into the facial veins; therefore, when symptoms of obstruction show themselves, viz., œdema of the eyelids, fulness of the frontal veins, and exophthalmus, they are to be explained, not by a simple thrombosis of the sinus cavernosus, but by the presence of thrombi at the same time in the ophthalmic and facial vein.

The internal carotid artery, surrounded by the sympathetic plexus, and the sixth nerve, pass through the cavernous sinus, and the third and fourth nerves and the ophthalmic division of the trigeminus are found on its outer wall. We can, therefore, readily anticipate the local phenomena which would be developed in consequence of pressure of the inflamed sinus upon these nerves.

An inflammation of the *cavernous sinus*, is, in the majority of instances, accompanied by meningitis, and writers have heretofore attributed the phenomena of an affection of the oculo-motorius to meningitis; but Wreden describes two cases of phlebitis of the cavernous sinus (l. c., cases 9 and 10, pp. 95–96), which, notwithstanding the absence of meningitis, showed familiar signs of irritation and paresis in the areas of the oculo-motorius and other cerebral nerves. Symptoms of disease in the region of distribution of the trigeminus, occurring in phlebitis of the cavernous sinus, declare themselves most frequently in irritation and paresis of the ophthalmic branch; the second and third division of this nerve show these symptoms only exceptionally. Irritation of the ophthalmic branch gives rise to one-sided headache, sometimes sharply circumscribed, its greatest intensity being in the *forehead* and over the eyes.

Wreden's cases seem to invalidate Griesinger's (*Arch. d. Heilkunde*, iii., p. 446) declaration that the headache is due not to the affection of the sinus, but to the concomitant meningitis. Fixed, one-sided, circumscribed headache is, consequently, of differential diagnostic value in an affection of the cavernous sinus, because it proves irritation of a single branch of the trigeminus; while *diffuse* pain, spread out over the whole half of the head, speaks more in favor of the coexistence of meningitis of the median cranial fossa, whereby the second branch of the trigeminus (before its passage through the foramen ovale), or even the Gasserian ganglion, is involved.

Phlebitis of the superior longitudinal sinus is characterized by repeated and violent hemorrhage from the nose, which Wreden considers very significant when accompanied by epileptiform convulsions. This latter symptom is referred to capillary hemorrhage in the cortical substance of the posterior cerebral lobes, produced by obstruction to the venous circulation of the surface of the brain (Wreden).

Phlebitis of the superior petrosal sinus, although producing no very characteristic symptoms, would give rise to great congestion in the labyrinth of the ear, with subjective noises and deafness, which is explained by the fact that the veins of the labyrinth terminate in this sinus.

In phlebitis there is almost always a marked febrile movement, and pyæmic symptoms are the rule in this condition. In Case II., cited above, chills were frequently repeated, and the temperature rose rapidly and with very slight remission. In Wreden's case of phlebitis of the cavernous sinus the initial stage was very short. On the first day the temperature rose and without remission to a morning temperature of 102.2° F., and gained in a few hours the maximum of 103.82° F. Such a sudden rise of temperature to a height of 39°–40° C., and more immediately on the first day, Wreden considers particularly characteristic of the beginning of the fever of an encephalic complication in purulent ear affections. Another valuable point in the differential diagnosis of the initial period of the fever, of encephalic complication, in inflammation of the ear, is that it rarely begins with a chill, even when, as Wreden observed in one case, the temperature was 104.18° F.; whereas in the fever of phlebitis of the cerebral sinuses and meningitis diffusa, usually the reverse is the case.

It is of importance that all cases of ear disease with suspicious but obscure symptoms of a cerebral complication should receive a careful ophthalmoscopic examination, and efforts be made to determine its value as an aid to diagnosis in the disease under consideration, and also to ascertain to what extent it should influence the treatment of the ear affection.

In Case III. (the writer's), the cerebral lesion was on the left side; the left eye was the first to become affected, and the first to recover (in the sense that there was no visible change in the optic disk or fundus oculi) and yet its sight alone was impaired. Mr. Nettleship has recently alluded to two cases (they are not reported in full), in one of which a tumor in the posterior inferior part of the right anterior lobe occasioned severe pain, chiefly on the right side of the face and head, with simultaneous double papillitis, and early extreme defect of sight in the right eye, but no failure of vision in the left eye till a year later. In the other case, the only lesion was softening of the under surface of the left frontal lobe, with atrophy of the left nerve. There was rapid blindness of the left eye without changes, and papillitis of the right without failure of sight. The left disk slowly became atrophied, the right recovered.

From the few accumulated facts it appears that the sight is most affected on the side of the lesion; and that papillitis with other symptoms of brain involvement is valuable corroborative evidence, and we also have some proof in the few cases of recovery, after neuro-retinitis and other signs of brain disease secondary to an ear affection, that the optic disk is, so to speak, a sort of indicator for the condition of the brain. But in the present state of the vexed question of the cause of the papillitis, it cannot be said that it tells us much of the locality of the cerebral lesion. Von Graefe's view of venous stasis and the theory of vaso-motor disturbance, are not supported by post-mortem evidence. Prof. T. Leber has more recently advanced a plausible view that the essential part of the transmission is taken by effusion of fluid into the sheath of the nerve, which did not act by simple mechanical pressure, since its quantity was often small, but by its phlogogenic properties. Leber, therefore, explains the origin of papillo-retinitis in cerebral diseases by assuming that the intra-cranial inflammation produces serous effusion which passes into the optic nerve-sheath, and excites irritating action on the papillæ and neighboring parts of the eye.

[1] St. Petersburg Med. Zeitschrift, xiii.

[2] Emil Sesemann: Die Orbitalvenen des Menschen und ihr Zusammenhang mit den oberflächlichen Venen des Kopfes, Arch. f. Anat. u. Physiol. u. wissenschaftl. Med., 1869, p. 159.

THE TREATMENT OF SCIENCE BY THE MILITARY METHOD.

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THE above heading looks professional, does it not? As if science were to be treated by some approved method, like any other disease. But that is not exactly what I mean. Science is far more capable of treating a military method as it deserves than is any military method likely to turn physician for the benefit of science. The military method of treating science is the method adopted by dunces the world over in trying to investigate what they do not understand, and cannot be made to comprehend. It commends itself by its simplicity, energy, and efficiency. It consists in taking the man who shows symptoms of being scientific out and hanging him in a red tape halter; if he kicks against being strangled it knocks him in the head with an official club, and says: "What a brave boy am I!" And all the rest of the dunces applaud the lynching. I do not see anything else to recommend the method. I never heard of any one who was cured of his science in this way. It is too heroic treatment—not a reasonable "kill or cure" method. It is all kill and no cure. It is what the literary dunces applied to Keats when they tried to cure him of his poetry. The universal mother took her poor child back to her kindly arms, and kissed away his tears. Tragedy like this is rare indeed—rare as are "these glorious sports of nature," as Huxley styles them, who make such tragedy possible. But the principle—the plan and method of treatment—is always one and the same, here, there, and everywhere; it is to-day, was yesterday, will be to-morrow, in civil as in military orders, applied alike to science, art, and letters. Applied to quivering flesh and shuddering spirit by that thing which has neither body to kick nor soul to damn—I mean the Confederacy of Dunces. It is simple, energetic, and effective, as I have said; but this kind of heroic treatment is open to serious objection. For it is the heroism of the Dunce. And what a brave boy he is, to be sure!

I cannot imagine how the preceding paragraph ran off my pen. I did not mean to speak of dunces—I never knew one who was not abundantly able to speak for himself, and the sound of his voice is familiar, if not musical. My idea was to say something about the relations between scientific and military affairs; about the position which I think the Army and Navy ought to take regarding scientists who are in military service; and especially about that curiosity known in the medical corps of the Army and Navy as a "second examination," or "examination for promotion." What I have to say is mainly prompted by Captain R. W. Shufeldt's article, entitled "The United States Medical Service," in a recent number of THE RECORD. I hope Dr. Shufeldt will follow up the subject. I like his way of putting it. He has a good sound case, and his vein will bear working. Granted, with Professor Huxley, that examination, thorough and searching, is an indispensable accompaniment of teaching, it does not follow that examination which has nothing to do with teaching is indispensable. In the latter case, it seems to me not even a necessary evil, but simply a nuisance, and no nuisance can ever be necessary. This second examination in the Army or Navy, of course, does not profess to *teach* anything. Does it learn anything, or discover anything? If an officer "skins through" by hook and by crook, is he not just as well off as one who sails through by luck, pluck, and force of circumstances? His position in the Army is not affected appreciably. He goes back to duty, and nothing has been lost or gained. If he is plucked, he goes back just the same, and makes it his duty to cram and come up again. He crams, comes up, passes, and knows no more or less than he did before, and is no better or worse doctor. To cram knowledge is not to know; crammed knowledge is invariably disgorged as soon as the crisis is over, not digested and assimilated, and made a living power, as all real knowledge is. The man's consuming power, not his productive power; his capacity for containing, not for retaining; his mental endurance, not his mental armament—these are what have been tested. And this is the very test that some of the best men should not be obliged to endure, for they are the very ones least fitted to undergo such an ordeal. The man of mediocrity stands a better chance than they do, and generally passes a better examination.

The thing doesn't hurt the one as it hurts the other; and there are men—few, it is true, but there are men—whom to hurt seriously is to kill; whom to wound in spirit is to destroy. And *that* man is just the one who is worth the rest of the regiment. He is the one who lacks the heroism of the dunce. He is the one who demonstrates the military method of treatment, where scientific treatment should have been given instead, by turning the drama of examination into a tragedy. The possibility of such a grave contingency as this is enough to condemn the whole system.

The second examination has its merits, as "a sieve to catch the bad rats." I am satisfied that this is its principal merit, and its only recommendation. This raises the question, however, whether rat-catching is a dignified or desirable occupation for any army officer, under whatever name and style it may be pursued. To call it and treat it as a medical examination strikes me as the military method in full bloom—one of the most military methods that could be devised. The military method is the method of brute force, in its most brutal and forcible exhibition. It is applicable to insurrections, and rebellions, and revolutions of nations, but it does not apply to rat-catching. Nobody ever caught a rat by brute force—not even a rat-terrier could do that. He is instinctively strategical; and his instinctive strategy is simply the scientific treatment of the case. The military method is in order after the rat is caught—not before. A rat, and especially a bad rat, is apt to be an old gray rat, whose science is quite equal to any test that can be devised by an examining board. In this case it is ten to one on the bad rat, as against the man I described in the last paragraph.

Since the examination proves futile in the rat's case, and dubious or even dangerous in the man's case, let us see if it is not also entirely superfluous in any case. The military idea is, that the examination determines an officer's fitness for the position he holds, and for promotion to a higher position in due course. But that is absurd. It does nothing of the sort. It simply demonstrates an officer's fitness to pass an examination—absolutely nothing more. His fitness for his position, or his unfitness, is perfectly well known before. He has been in the service at least five years, perhaps ten or fifteen. He has been busy telling people whether or not he is fit for his position every day of his life during that period. He has built and furnished his house, for better or worse, and hundreds of his brother officers know it perfectly well when they see it. So do a thousand soldiers. In short, he has made his reputation, whatever it is. It is all abroad; it is in the air—pshaw! there is not a clerk in the surgeon-general's office but knows well enough how that officer "stands." Individually, of course, no clerk, no soldier, no line-officer, is as good a judge of the man's fitness for the position as any one of his medical examiners. Collectively, however, judgments of the rank and file is absolutely conclusive; nothing that he can say to his examiners, nothing that he fails to tell them, nothing that they can tell the surgeon-general, alters the case one iota. How should it, indeed? How should a conversation held for an hour or two with his examiners, when he is probably under strain and stress of mind, and of all hours in his career the least likely to appear himself, bear upon that silent, stealthy, steady inquisition he has endured for years? The latter is the examination that tells the true story; if his thousand and

one examiners consider him fit, he *is* fit, and there is the end of it—or ought to be. And if, after all that, the Board says he is unfit, why, the Board is doubtless mistaken—that is all.

Depend upon it no Board is going to find out anything about a candidate that everybody did not know before, excepting his ability to pass an examination under every possible disadvantage. If the Board differs with public opinion, the result may be mischievous, even dangerous; if it agrees with public opinion, it is at best an elegant superfluity.

I will go one step further, and say, that almost any officer of the medical corps is a better judge of his own proficiencies and deficiencies than any Board can expect to become under the present system of examination. He knows himself a great deal better than they can find him out, and could give a stricter, sounder, and more reliable account of himself under almost any other method of being called to account than the one now in vogue. And an officer of the medical corps of the army is almost invariably a man who would *do it*, too, fairly and squarely, saying just where he felt weak and where strong, just what opportunities he had had, and just how he had improved them, and just what he needed, moreover, to enable him to reflect the most credit upon himself and his corps, and do his patients the most good—all of which he is scared out of doing the moment the examination-battery opens fire on him.

I think, therefore, that this examination business is in the first place dangerous, in the second dubious, thirdly futile, fourth superfluous—in fine, a military method of treating science, when what it ought to be is a scientific method of treating a specific military contingency. That it is occasionally amusing, however, I can easily show.

Some ten years ago, holding then substantially the same theories upon the subject that I have here voiced, I was ordered before the Board. I had been nine or ten years in the service, mostly spent, as usual, in the West and South. I had some reputation, such as it was, as a scientist; none at all in the profession of medicine, for which I never had any fancy or any ambition, and in which, consequently, I never displayed any special aptitude or excellence. I had doctored people to the best of my ability, cut off their legs and arms occasionally, taken care of government property, sent in regular reports, and obeyed orders—always in an automatic and perfunctory way, with my head full of other things in which I took a vivid, resistless, and irrepressible interest. I was at the time writing some books at the Smithsonian in Washington, and expected to continue to do so indefinitely—and, in fact, I have done so ever since. The order came without warning—though if I had been told to expect it every day for five years before, it would not have made any difference, I suppose. I voted the whole thing a bore; and being very busy indeed, wanted to get rid of it as soon as possible. I could not possibly have spared the time to do any cramming, had I been given opportunity to do so, and should never have been better prepared than I was at the moment. I did not expect to be thrown, I confess, but I knew perfectly well the Board could do so if they wished to; so I reasoned that I had better make it as pleasant as possible for the gentlemen I was to meet by not troubling them to put too many questions, the replies to which might not affect them agreeably. In fine, I was disposed to waive answers altogether, and so leave the Board quite free to act at its own discretion. I went to New York immediately, and had a good time for a few days with some officers who were there on the same errand, and then presented myself. After passing the compliments, and having some pleasant chat, "the trouble began." One of the gentlemen asked me about rheumatism and Bright's disease. I said that I did not know whether the blood was acid or alkaline in the former disease, nor how to cure it; and that I had never seen a case of Bright's disease. Another asked me what I thought of somebody's theory of phthisis. As I had never heard of the theory or its author, I said very truly that I did not think much of it, but presumed it had its merits. Another asked me about some delicate operation upon the eye, and I said I had never operated upon the eye, and never expected to. Things began to look queer, and it was odd-or-even whether I could make my theory of examinations work in that particular instance. But when it came the President's turn to interrogate me I felt easier; for I knew by common report that he was going to ask me what an aspirator was, and I had taken the trouble, that very morning, to hunt up one and master its mysteries. The contrast between my bold and cheery reply to this momentous question, and my previous remarks on other topics, was too much for the gravity of my examiners, and there were five gentlemen grinning at one another like Cheshire cats in a moment. The aspirator finished the interview; and taking a hint from the President, with alacrity I bowed and withdrew. A few days afterward I received a letter from the Surgeon-General, informing me that the Board had found me qualified for promotion, but that I had apparently not kept up with the progress of medicine. Why, bless my soul, I could have told General Burns that, if he had asked me, instead of sending me to New York to prove it to four army surgeons by hunting up an aspirator! What puzzled me was, how did they discover that I was qualified for promotion? Excepting the aspirator, I had not given the slightest sign of knowing anything about my profession, to say nothing of keeping up with it. But I reflected that that was the Board's business to discover, and how they did it was a conundrum I was not obliged to answer. Remembering, also, that I could catch up with the procession at any time I wanted to, I lighted a cigarette with the Surgeon-General's communication, and thought no more about it.

But now, what were the actual facts in this case? How came the Board to make a favorable report on such an unfavorable basis? I take it, simply this: the report was not based upon anything that transpired in the examination-room, except in so far as a friendly rap over my official knuckles was given, to save the Board's official conscience. If I had passed even a tolerable examination, the report would have been the same, minus the rap. I had simply presented myself *in propria persona*, and the report was wisely, justly, and courteously based upon what I was, not on what I happened to say or not say in that brief hour. My theory was proven: the examination was a nullity in my case, *and properly so*. Why? Because my examiners did *not* apply the military method to the treatment of science, having discrimination enough to apply the correct, which is the same as the scientific, method to the treatment of a military contingency. It was, in short, a piece of dunce-business we were about, they and I; and we both got out of it by rising superior to it.

Some one may rise to object, at this point, to my ungracious way of remarking upon what was, according to my own showing, great forbearance on the part of my examiners, and great good luck for me. I think I recognize the sound of the objector's voice. It is a familiar one, not a musical one. No "forbearance" was shown me; the case did not require, nor indeed admit it; it was simply decided on its merits.

Take another case. I was recently conversing with a medical officer who had been thrown. It pained me to see the effect it had upon the man. Not that it hurt him in anybody's estimation but his own, or is likely ever to do him any ostensible injury—nobody cares a straw about such things but the man himself. Nor did he—or could he—complain that the examination was not fair and just, or that he had not failed fairly and justly. So much the worse! It was a refined piece of wanton cruelty to which he had been subjected, leaving him not even the vantage-ground of complaint whereupon to settle the affair between his wounded spirit and him-

self by abusing his examiners, and proving himself an injured man. I knew this gentleman intimately, having served with him, and in fact been his patient more than once. His reputation, if not a brilliant one—as it would become should opportunity offer—was enviable. He was liked and respected by his associates; he enjoyed the confidence and respect of his patients; was zealous and faithful in the discharge of his medical and military duties; kept a good hospital; kept his accounts straight. He was sound, mentally and morally; not very strong physically; scrupulously nice, even over-sensitive, on a professional or personal point. Very well: he is ordered before an examining Board to plead a case of self-defence, counsel and client in one; a case upon which grave consequences appear to him to depend. He proves unequal to that emergency, and is advised that he may try it on again pretty soon, and must make it go next time, or go himself. Six or eight years of examination creditably sustained at the hands of a thousand self-appointed inquisitors go for nothing.

This officer, I contend, has been both wronged and injured. He has been wronged, by being subjected to needless cruelty, issuing from a cast-iron system, too hard and military to be applicable to the requirements of his case. He has been injured, too—injured mentally and physically—stung to the quick, wounded where he lives, in his very marrow. Without regard to the humanities, viewing him simply as a physiological mechanism, he has been put to a wrong purpose, and in handicapping him in this way, the service is crippled to the extent to which this particular cog in the wheel has been bruised and bent. All the boring and cramming he can do will be no offset to the deterioration the machine has suffered in being set to do a needless piece of work—"pass an examination." If I, or any other officer who had served with this one, and knew him well enough to give an intelligent and reliable account of him, had been asked to testify, we should unquestionably have done him that justice which, it seems, he was unable to do himself. This was probably a case the reverse of my own; one which—through no fault of the examiners—hinged upon a pernicious system, based upon a radical dunce-theory. It were far better, I think, to satirize the theory, and kick the system out of court, as I did, when I was satisfied that it would never do to let it be applied to me.

Since Dr. Shufeldt has adduced his own case with an audacious candor and confidence I cannot sufficiently admire—enough to send the cold-creeps down the spine of any well-regulated military man—I feel free to speak of it also. Now that he is out of the woods he can afford to laugh; but I suspect that the worst use he could have been put to, next to hanging, was that which he was put to when he was sent before the board. In the first place, needless pain was inflicted—always a stupid and unscientific thing to do. Secondly, he spent a year in grubbing a lot of old text-book bricks out of the cellar of his mind's house, and polishing them off for his examiners' inspection. That was so much time wasted, to say nothing of the mental friction required to think clearly with a load of useless bricks in the upper story. No mind works well when encumbered with unnecessary facts. Library shelves were made for a purpose; and, as old King George III. used to say, the greatest lawyers know no more law than the rest—only they know where to find the law. I cannot suppose that Dr. Shufeldt is any better officer or any better doctor for having succeeded in an examination, any more than I supposed him the contrary when he did not succeed. Nothing is proven either way, excepting the ability to work under stimulus, as Huxley says.

Knowing Shufeldt as intimately as I do—and I have for some years watched his career with special interest—I should say he was the last man who needed stimulus to work. He is whip and spur enough to himself; one upon whom the lash of the military method should never be suffered to fall; for when it does fall, as it did at his first examination, the service suffers specifically to the extent to which he is injured himself. The medical corps loses exactly what it costs Dr. Shufeldt to catch up with his examiners and get himself in working order again; for all the effective energy he spent in that affair was simply wasted, and the corps gains nothing in return. To pass or not pass an examination is nothing *per se*.

What Shufeldt needs is neither stimulus nor discipline. He needs an opportunity, not an examination, in order to be put to the best use the army can make of him. So long as any man is voluntarily a member of an organization, civil or military, certain regulations and restrictions must be enforced in his case; but the greatest good to the greatest number is likely to come when rules are best adapted to the individual. It is the military method again, instead of the scientific, when all rules bind alike on all persons. The wisest discipline leaves the widest margin for individual idiosyncrasies; the right solution of the personal equation solves the general problem. To make a square peg fit a round hole is as impossible as the quadrature of the circle. One of two things must happen. Either the peg wears round, and sinks into the hole at last, or it stays square, works loose, and is gone. Nothing but friction during either process.

If I am not greatly mistaken, Dr. Shufeldt was cut out for a scientist, and has the requisite qualifications to become a great naturalist. I think I recognize the spark that is in him. If it *is* there, and no mistake, nothing can extinguish it, and I thank God every day of my life that there are men in the world whose inner light, like Greek fire, can burn under water, if needs must be. The practical question is, not whether such fire can be put out, for that is impossible, but what is to be done with it? Is it to be a producer or a consumer? Either is possible, equally possible, I almost said. Let it produce, and the world is the wiser and richer; for ideas are born in that kind of fire, and ideas are imperishable, and rule the world absolutely. Let it consume—well, ask Keats, for example, *what* it consumes.

On my theory that this young naturalist has the spark, he does not belong to the army. On the contrary, the army belongs to him, and nothing that the army can give him is too good for him. He never ought to know a "commanding officer." He never ought to hear sick-call blow. He never ought to see a patient. He never ought to put on a cocked-hat, and strap a sword on—that is, if my theory is correct. Give him only the necessary conditions of environment, and prove me wrong if am wrong. If I know anything, I know a naturalist, and I know what a naturalist needs—what a naturalist must have—what a naturalist will have, in or out of the army.

But, you say, this Dr. Shufeldt, is he not an army surgeon, paid by the Government to perform medical duty? Why should an exception be made in his case? He is not hired to be a scientist, he is hired for a doctor. What business has he to be writing books instead of attending to the sick and wounded of the army? What is all this long, rambling tirade about sparks? What is this man driving at anyhow?

My dear sir, I will tell you what I am driving at. I am driving at you. I do not recognize your face, but the sound of your voice is familiar and unmusical. I see that you have a red-tape halter in one hand, and an official club in the other. I see that you are a brave boy, but you belong to the Great Confederacy. You have the heroism of the dunce. You are the "Treatment of Science by the Military Method."

SMITHSONIAN INSTITUTION, WASHINGTON,
September 1, 1883.

TO REMOVE WATER FROM ALCOHOL.—If gelatine be suspended in ordinary alcohol it will absorb the water; but as it is insoluble in alcohol that substance will remain behind, and thus nearly absolute alcohol may be obtained without distillation.

MANGANESE AS A STIMULANT OF THE MENSTRUAL ORGANS AND AS A REMEDY IN CERTAIN FORMS OF AMENORRHŒA AND MENORRHAGIA OR METRORRHAGIA.

By FRANKLIN H. MARTIN, M.D.,
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Since Ringer and Mussell, of London, called the attention of the profession to the gratifying results obtained in experiments performed by them (*Lancet*, January 6, 1883) in the treatment of certain forms of amenorrhœa by permanganate of potash, I have taken advantage of every opportunity that has been afforded me, both in dispensary and private practice, to satisfy myself as to the action and efficacy of the new remedy in that direction. I have been more than gratified with the result. I have found that manganese will not only relieve certain forms of amenorrhœa, but also of menorrhagia and metrorrhagia. It is, of course, unnecessary to say manganese, or any other one remedy, cannot be expected to relieve all cases of amenorrhœa or menorrhagia, when each is dependent upon so many different causes. As amenorrhœa is only a symptom, not a disease, it would have been much more satisfactory if Ringer and Mussell, in their little article, had mentioned with greater explicitness the peculiar forms of amenorrhœa in which they found their remedy to exert its great influence.

From my observations I have been led to consider manganese in any form a direct stimulant to the uterus and its appendages. It may exert this influence by acting as a direct vasomotor nerve-stimulant to the vascular system of the parts, and in consequence of the improved circulation directly increase the tone and nutrition of the organs, or it may exert its whole force through stimulation of the sexual nerve-ganglia, or even possibly the sexual *nerve-centres*, thereby bringing the organs to their normal state of action. At any rate, its action is prompt and direct. In bringing the uterus and appendages to a normal state of menstrual tonicity, when the lack of tone is dependent upon some previous depression of innervation, manganese, in my opinion, certainly has no equal. Even when the cause of the depressed innervation is still acting, this remedy will exert its stimulating power over the menstrual mechanism. In consequence of phthisis, menstruation had not occurred in a young woman, eighteen years of age, for four months. Experimentally the manganese was given in connection with her other treatment. Menstruation occurred within a week. Another young woman, twenty-four years of age, with an aggravating digestive trouble of some years' standing, had become very irregular—flowing profusely for a week or two, then scantily for an equally irregular time, again followed, perhaps without any warning, by a profuse flow or as likely a complete cessation. This state of affairs had been going on for more than a year. There was no pain with the flow. She was very weak and anæmic from the effects of indigestion and loss of blood. This patient was given two grains of the permanganate of potash, dissolved in one-half glass of hot water every night on retiring. It was kindly received in this way by the irritable digestive organs. In a very short time there was a decided improvement in the menstrual trouble, and the patient has since menstruated three times normally.

In young girls who are irregular in the early months of menstrual life, where it is simply caused by the natural weakness of the partially developed organs of generation, or where, from an overworked nervous system, the organs are robbed of their natural nerve force, this remedy seems to possess the stimulating properties requisite to bring them into healthy action. A remarkable case of this kind was that of a young girl who had menstruated once. Eight months had passed, and the menstrual flow had failed to appear again. The mother of the girl, being alarmed, sought advice. The permanganate was given in two-grain doses twice a day. Within a week the girl menstruated the second time in her life. In two other cases of "missing" in young girls, without any apparent cause, or any other symptoms, the remedy given in the same doses a few days before the next regular period was expected, stimulated the organs to a normal flow. The action of the manganese was so prompt in these cases that I am convinced it was no mere coincidence.

It is well known that from exposure to cold the weakest organs of the body are the ones most liable to suffer. A woman, who, when exposed to cold, immediately suffers suppression, cessation, or excess of the menstrual flow, will invariably be found to possess susceptible and weak menstrual organs. In cases of this kind, viz., suppression, cessation, or excess of the menstrual flow, caused by "catching cold," with no other apparent cause, the most gratifying and prompt results are obtained from manganese. The above variety of cases are of so frequent occurrence that in them I have had numerous opportunities to test the new remedy, and I have yet to see it fail, in either amenorrhœa or menorrhagia, when due to the irritation of cold alone. In several cases where the flow was a week or ten days overdue, from "catching cold," the permanganate was given in large doses, and its almost magical effect demonstrated by the flow appearing within twelve hours.

Although I have had greater opportunities for testing the value of manganese in amenorrhœa than in menorrhagia or metrorrhagia, I have received unmistakable evidence of its power in the latter forms of menstrual trouble.

Menorrhagia and amenorrhœa in their outer manifestations are exactly opposite in nature, but they are very often dependent upon the same causes. When the cause is anæmia, or any depressing constitutional disease producing a perversion of the functional activity of the menstrual organs, and this perverted action consists of an irregular or excessive flow, this condition will as readily succumb to the stimulating effect of manganese as when the opposite condition exists. The following cases are of interest: A woman, aged twenty-six, sought advice for excessive and irregular flowing. She had been married two years and had one child, twelve months old. The child was large and strong, the mother physically slight. The mother nursed the child. For ten months she had stood the strain very well, when she commenced to fail, suddenly grew weak and anæmic, and began to flow excessively. This continued with but a few short irregular remissions until I saw her at the dispensary. She was given two-grain doses of the permanganate of potash four times a day, at the same time all other treatment was withheld. In three days the patient returned saying that the flow had stopped the next day after receiving her medicine. I then discontinued the manganese, prescribed iron and nourishing food, and she continued to improve. By digital examination nothing abnormal was found in the above case. Another case was that of a large, stout woman, thirty-five years of age, who came to the dispensary suffering from menorrhagia. Her menstrual periods were regular as to time but the quantity of blood was alarmingly excessive and would last for two weeks. She was married, had three children, the youngest three years of age. This abnormal condition of menstruation had been coming on by degrees for a year. The uterus was a little enlarged, and soft to the touch, otherwise, by physical examination, nothing abnormal. Four days before the expected flow she commenced taking the permanganate in two-grain doses three times a day. Menstruation came on at the expected time, and after a normally free flow for four days passed off naturally. Before the next period the same treatment was repeated, with the same marvellous result.

I have been particular to give here only typical cases. In a number of other cases I have received very gratifying results, and I am myself convinced that in properly selected cases others will be able to obtain like results.

Although manganese, like the allied metals, nickel, zinc, iron, and silver, has a direct influence on the blood as a tonic in anæmia, chlorosis, etc., it cannot be pos-

sible, in my opinion, that its peculiar influence on the catamenia can alone depend upon that virtue. To influence the organs of menstruation by acting as a general tonic, would necessarily be a slow process, and the effect would be very gradual. It undoubtedly, however, as a general tonic, has a predilection for these organs. This was noticed and commented upon by W. H. Broadbent, of London, after experiments performed by him, and recorded in the "Proceedings" of the Clinical Society of London for 1868–69, vol. ii., p. 122: "Manganese," he says, "seemed to have a special influence in promoting the return of the catamenia, and nickel a special property of checking leucorrhœa." But one can readily see by the character of the cases reported by Ringer and Mussell, and myself, that manganese must have a more direct mode of influencing the menstrual organs than by the necessarily slow one of a general tonic. As to what that influence is, I am not prepared to advance any more definite opinions than have already been included in this short article. I shall look with great interest in the future for the results of other experimenters in this direction, while personally taking advantage of every opportunity presented to extend my knowledge on the subject.

In prescribing the permanganate of potash (the most convenient preparation in which to administer manganese), it will be well to bear in mind a few points of importance. The preparation has a disagreeable, distressing effect on the stomach when taken undiluted, which may be obviated by administering when the stomach is full—immediately after eating—or dissolved in considerable water. In administering the permanganate in pill form, it must be remembered that excipients ordinarily used by dispensers will produce with the drug spontaneous combustion. The following basis has been found to act well: "Vaseline two parts, paraffin wax one part; melt, stir till cold, and add kaolin, three parts; mix well," roll out, and dust with kaolin (*Lancet*, January 13, 1883). Dry gelatin capsules I have found to be the most convenient form in which to administer the remedy.

THE BROMIDE OF SODIUM IN THE TREATMENT OF EPILEPSY.

By J. LEONARD CORNING, M.D.,

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In a recent lecture by Professor Dujardin-Beaumetz, published in The Medical Record of August 25, 1883, the following sufficiently remarkable statement occurs: "I have made many trials of bromide of sodium in epilepsy, and notwithstanding the considerable doses exhibited—ten to twelve grammes a day—I have never succeeded in arresting attacks either of petit-mal or grand-mal by this salt. I have therefore been astonished to see in Hammond's remarkable work on 'Nervous Diseases' that this eminent neuropathologist gives the preference to bromide of sodium in epilepsy." To American practitioners, at least, the above statement cannot fail to excite astonishment; not that it is at all extraordinary that there should exist some difference of opinion respecting the relative therapeutic value of the various bromides, but rather because the particular preparation known as the bromide of sodium should have been singled out as an object of disparagement. Now, if there is one fact relative to the bromide more thoroughly established than another, it is the superiority of the sodium salt, and for this reason, that the prejudicial effects which are so conspicuous a concomitant of the other bromide preparations are in great part absent in this (the sodium) salt. In this connection Dr. W. J. Morton says (*vide* Dr. Morton's admirable paper on the "Treatment of Migraine," *Medical Gazette* for July 21, 1883): "It is a matter of clinical experience that larger doses of bromide of sodium may be tolerated for months without evidences of the bromide rash and without failure of the health." "On the contrary, a patient thus treated gains flesh, eats well, and has good color." "For instance, M. B——, treated for epilepsy, has taken 90 grains of bromide of sodium daily for one year and is the picture of health."

This is a *multum in parvo* of the whole question. We give the bromide of sodium, not because we expect to prevent the attack with more certainty than with the potassium salt, but because we hope to avoid the inevitable disadvantages to general health which are the result of a considerable and prolonged employment of the latter preparation.

But Dr. Dujardin-Beaumetz tells us that he has not succeeded in arresting the attack with the sodium salt. Now if there is one fact more thoroughly established than another, it is the ability of the sodium salt to arrest the epileptic seizure, not alone for weeks and months, but even for years. Thus my friend, Dr. M. Josiah Roberts, of this city, has recently communicated to me the history of a case in which he succeeded in reducing the number of attacks from two or three a week to only one every three or four months for three years, by the use of the sodium salt; and doubtless the result might have been materially improved had the patient paid due heed to general prophylactic measures.

I have employed the sodium both in epilepsy of adults, as well as in that of young children, exhibiting the remedy in far larger doses than could have been possible had the potassium salt been employed, and not only was the attack satisfactorily arrested but the general health of the patient showed substantial improvement, as proven by a considerable gain in weight. This was particularly true of a boy of fifteen years, who before treatment often had as many as four attacks in a single day. When I first saw this patient he was suffering from the bromide rash and his mental condition bordered on dementia, he had been treated with heroic doses of the potassium salt. Appetite was poor and general appearance of patient emaciated in the extreme. Owing to the sickly appearance of the boy his family had discontinued the use of all medicine, and the fits had returned with all their former severity. I ordered the bromide of sodium in forty-grain doses three times a day, and put the patient on eggs and milk. At the end of three months there had been an actual gain in weight of nearly twenty-five pounds, and the number of fits had been reduced from an average of about three a day to two or three a month. So great was the change in the mental and bodily condition of this boy that his own mother who had been separated from him during treatment hardly recognized him. Besides the above case, which is sufficiently striking, as exhibiting the remarkable constitutional effects of the remedy, I can recall several other instances in which I have had occasion to witness the wonderful effects of the bromide of sodium in epilepsy. As a matter of course some sort of attention should be paid to dietetics and general hygienic rules; but the same may be said with respect to almost any other remedy which has been employed in epilepsy. There is, therefore, no doubt that in bringing the bromide of sodium prominently before the profession in connection with the treatment of epilepsy, Dr. Hammond merits the gratitude of all who are interested in the therapeutics of this most frightful disorder.

As to the lack of success attending Professor Dujardin-Beaumetz's attempts with the bromide of sodium, I can only find in them one of those unaccountable exceptions, which, if not refuted promptly, is calculated to mislead those whose experience with the remedy in question is as yet limited. This seems to me the most charitable view to take of the case. To those, however, who have become intimately acquainted with the manifold advantages of this wonderful remedy, not only in epilepsy but in very many other neuroses, it must of necessity cause no little astonishment that a gentleman of such prominence as Dr. Dujardin-Beaumetz deservedly is, should at this late day, question the efficacy of such a well-established remedy as the bromide of sodium.

SOME REMARKS ON CANCER.

By JOHN FERGUSON, B.A., M.B., L.R.C.P.,

ASSISTANT DEMONSTRATOR OF ANATOMY TORONTO SCHOOL OF MEDICINE.

THOROUGHLY convinced that carcinoma is a local disease, and arises *de novo* as the result of some form of injury or irritation to the part that becomes affected, I began a series of researches in the year 1878. The result of these investigations I shall now briefly detail.

It is quite needless to say that cancer is of the epithelial type. There is nothing abnormal in the fact of its being epithelial, but in the fact that the epithelium occurs where it should not, and is arranged after a manner differing from that of normal tissue. There is evidently a date previous to which a tumor that ultimately becomes cancerous is not cancerous, in other words that there is a pre-cancerous period to such new formations. When and where to draw the exact boundary line between the condition that is yet benign, and that malignant, devouring state called a cancer, is not easily defined. Another question of great difficulty, yet of great importance, is, why the same kind and extent of injury, as far as we can judge, acts as the initiative which produces this dread disease in one person while it fails to do so in another.

The answer to this question I think we are to seek in what I shall call a constitutional tendency. I am strongly of opinion that this tendency in different diseases has not received due attention. A child is born free from any disease, yet with an inherited tendency to some form of ailment in one or other of its tissues. If this tendency to take on diseased action be marked in the case of the secreting glands, and particularly if this tendency exist in the epithelial elements, we have the main conditions necessary for the production of a cancer. There may be several existing tendencies in the epithelial cells of the skin and glands; still, as regards the genesis of cancer, I think the rapid multiplication of the cells is the most potent factor.

One fact to which I have paid much attention is that a cancer is not infective until the definite structure of this new formation has been evolved. Thus, so long as the secreting tubes of the affected gland are packed with epithelium, but no epithelium can be detected in the tissue outside of the tubes, while no alveoli are found filled with these cells, there is no infecting power to neighboring parts and adjacent glands. I make this remark very advisedly. While the secreting tubes are thus blocked up and filled with epithelium, but none found in the gland tissue, we have what may be regarded as the strictly local stage of the cancer growth. Once, however, the disease has advanced so far that the epithelial cells can be discerned in groups throughout the gland, there is no further safety from infection.

Another point of great moment is from what element in the gland does the cancer take its origin. To this I answer unhesitatingly, the epithelium. If we take a cancerous breast, which the surgeon has removed, keeping well clear of the diseased tissue, with the idea of preventing its return, then, after carefully preparing a great many sections of the tumor, we shall find that a section taken from the truly cancerous part will reveal all the histological characters of the disease; a section nearer the edge of the tumor often shows these conditions in a less marked degree; a section still farther out shows them still less definitely: and so on gradually, till all that can be detected as wrong is simply the secretory tubes crowded with epithelium. Follow in this manner, taking section after section, gradually proceeding to the outer parts of the tumor, and finally we reach healthy tissue. Should the removal be complete, and no neighboring portion of the body have become affected previous to the extirpation of the diseased mass, freedom from a return will likely have been secured. During the past five years I have examined twenty-three cancerous mammæ, and without exception found the above law to hold good. What does this argue? It seems to me that the only conclusion we can draw from this is that the diseased process begins in those tracks and channels that are lined by epithelium; and from these, as starting-points, invades the connective tissue of the gland.

The following case came under my notice: A young woman was delivered of an illegitimate child in December, 1882. About three weeks after she had an abscess in the left breast from exposure to cold. This I opened freely and it soon healed. In June she came to me, saying that she could not sleep for the pain of this breast. The pain steadily grew more intense, and I advised her to have it removed. Going out of the city for a short time for her holidays, she died of some actue abdominal trouble. I succeeded in getting the diseased breast for examination, and shall state briefly what I found. Nearly three hundred sections were examined. Throughout the entire gland the ducts were full of proliferated epithelium, while only in one small portion could the true appearance of cancer be found. This was about one inch from the point where the abscess had been incised. This was the most advanced part of the disease, and it was here only that the epithelium could be found in the inter- and peri-glandular connective tissue. Had this woman died a little sooner, no cancer tissue would have been found; had she lived a little longer there is every reason to think that the whole gland would have been more or less infiltrated.

Another point of great moment is the infectiousness of cancer. Although, as I have shown, cancer arises from some injury done to a part by which its normal elements are deflected into an abnormal arrangement of themselves, still after a time it loses its purely local nature and steps out into neighboring parts. It has long been observed that cancer affects the lymphatic glands lying near it, and on that side toward which absorbed material passes. In what way the glands become infected is a question that lies at the bottom of a long series of important facts, both pathological and therapeutic. Lymphatic glands above the seat of some irritation often become enlarged. As an example we might mention that of a boy who bruises his foot, and as a consequence of this the chain of glands in the femoral and inguinal regions become enlarged and painful. But as soon as the source of trouble in the foot is removed, and a little rest obtained, the tender and swollen glands become normal. It is not so in cancer. Once the glands have begun to enlarge, say in the axilla, the removal of the diseased mamma will not suffice. In this case a set of pathological changes are started which do not spontaneously stop. This points to the fact that it is not a simple irritation of the glands. The truth is that the same kind of changes are established in the gland that previously existed in the breast. Take one of these axillary glands and subject it to a most thorough microscopic examination and we find what we found in the cancerous breast. The secreting tubes are crammed with proliferating epithelium, presenting the same appearance as to size and arrangement of nuclei which was noticed in the parent source of infection. In more advanced stages of the disease in other sections of the same gland, or in sections of other glands, these epithelial cells can be detected passing beyond their proper limits and invading the walls of the secreting tubes; still further advanced, they can be found outside of the tubes in the gland tissue, and a little more and the alveolar arrangement of the cells and inter-glandular connective tissue is seen. Here is a set of events by which a new formation, or sort of new existence, is established within the animal body. By sowing apple-seeds varieties of apples are obtained; but by grafting, these varieties are perpetuated. A sort of species of tissue arrangement was originated in the breast as the result of the injury inflicted upon it; or, as the consequence of long-continued irritation. Once this kind of tissue species is

formed in the mammary gland it is conveyed to the near lymphatic glands, on the principle of grafting; when tissues have run into the carcinomatous mould there is a very strong tendency to reproduce themselves; and it matters little where they may be planted, if they take root at all, it is only to develop a cancer.

From the examination of nineteen very suspicious cancerous breasts, it does not appear that there is much tendency, if any, to affect the lymphatic glands, until that stage of new life is reached when the epithelium is distinctly abnormally situated. It is not until these cells are found without the secreting ducts and grouped in the connective tissue that we find any power to cause infection of the glands above. The nineteen cases just mentioned were in the very earliest stages of diseased action when the ducts were packed, but no alveoli formed. The appearance, however, so far as it went, was such as invariably occurs in the growth of a typical cancer. Most of these specimens were obtained from cases where death had taken place from some other affection; a few only where the mamma had been removed on the ground of suspicion. The great probability, indeed certainty, is that these breasts were cancerous in the early stage, judging both from clinical and microscopic characters obtaining in each. The only part in the evidence wanting to confirm their cancerous nature was the absence of definite aveoli containing groups of cells.

In another group of cases in which there was enlargement of the axillary glands, a microscopic examination of the new formation in the breast always revealed the true characteristics of cancer. This showed that in order to infect the glands the disease in the breast must have advanced to that stage, at least, when the epithelium is found in the connective tissue outside of the walls of the ducts, in a locality where it should not exist, and is abnormally arranged.

There is some peculiarity about cancerous epithelium which we may never be able to fully determine. It has a tendency all its own, so that when it is planted in a structure, as yet healthy, it has the power of producing diseased action, and this I think in two ways: First, by the proliferation of the diseased cells carried from the affected to the non-affected parts; and secondly, by exciting a diseased action in the epithelium of the part to which the infecting material is carried. This is what we might call the intrinsic quality of the epithelium from a cancerous gland. According to some of our great pathologists, there is no such thing as a cancer cell; according to others there is a difference in the so-called cancerous epithelium and that which is healthy. By these latter the epithelium is regarded as larger, more varied in form, and with larger and more distinct nuclei and nucleoli. The results of all my own observations, taking the great average of cells, is in favor of the latter view. Setting aside all microscopic distinctions, however, there is some vital property which, existing in certain epithelial cells, pre-eminently entitles them to be called cancer cells. We cannot under the microscope tell what spermatozoön would be capable of transmitting syphilis, and yet such a power may be resident within it.

At what period of the life of a new formation, destined to become cancerous, the elements of which it is composed acquire infecting power, we do not at present know. A few experiments may help to settle this question. A breast was removed in which the cancer condition was well marked. As stated at the beginning of this article, different sections gave different results. In some the ducts only were so crowded with epithelium, in some these cells existed outside of the duct-walls, and in some the aveloli and cell-groups were found. From that part of the diseased breast which yielded a good sample of cancer tissue I placed a number of grafts in the parotid and submaxillary glands of three young dogs, and awaited the results. The dogs grew, and in two out of the three cancer developed in the glands so treated. From the same breast, but from parts that did not yield the cancerous arrangement of tissue, but simply an accumulation of epithelium in the ducts, portions were taken and planted in the same glands of three other puppies of the same litter. In none of these did cancer make its appearance, even at a period long after that at which the disease appeared in the two of the first group that were experimented upon. One of the first three became distinctly cancerous in eight months, the other in a little over ten; while of the three last pups, none showed any symptoms after a lapse of more than two years.

What, we might ask, is the infecting material in the case of cancer? Is it the fluid from the diseased part, the connective tissue débris, a new cell, or the epithelium? That it is not a new cell may be answered at once; for no new special cell belongs to the life history of cancer. On the other hand, it seems almost a certainty that the materies morbi for the spread of the disease is not from the connective tissue in any way. Take the example of cancer in the breast once more, and we find that the axillary glands may be very much enlarged at a period when the most careful and repeated microscopic examinations of the mamma reveal no evidence whatever that its connective tissue is breaking down. The most searching examinations also fail to show that anything likely to have come from the connective tissue can be found in the lymphatic channels. It seems, again, that it cannot be due to any fluid, pure and simple, unless it contains floating in it some solids from the cancer-growth. In the experiments performed on the pups, where a portion of the cancer was taken free from epithelium in alveolar spaces in the tissue, no cancer was produced by engrafting. Now, it can hardly be supposed that a section from the same tumor would not contain the same juices throughout, although the arrangement of the cells and fibrous tissue differed in different portions. That it is in all probability the epithelium that is the active agent in causing the appearance of cancer in neighboring glands seems to me almost to follow from what I have next to state. In no case have I been able to find any evidence of enlargement in the lymphatic glands prior to the date at which, when the cancer is removed, free epithelium can be found wandering, so to speak, in the connective tissue. When this stage has been reached, and not till then, have I been able to find in the lymphatic vessels or glands anything resembling the epithelium found in the alveoli of a cancer. After this date, however, such wandering epithelium can be detected.

One more remark, and I have done. There seems to be some strange change going on in the tissue of a part which is becoming cancerous; and up to a certain point it is benign, beyond this malignant. It is, in other words, acquiring a new power and existence of its own. For a certain period the ovum is only a mass of protoplasm endowed with vitality; by and by it comes to have a separate life of its own, independent of the parent, and possessing peculiarities which it in turn is capable of transmitting. It does not appear that the epithelium in a cancer has acquired infecting power until the alveolar condition has been attained, or, at all events, until the epithelium is found in the connective tissue.

THE RELIEF OF TOOTHACHE.—Dr. Kenneth W. Millican suggests the following convenient method (*British Medical Journal*): "It is a modification of a method recommended by Professor Babaieff to the Caucasian Medical Society. Melt white wax or spermaceti, two parts, and when melted add carbolic acid crystals, one part, and chloral hydrate crystals, two parts; stir well till dissolved. While still liquid, immerse thin layers of carbolized absorbent cotton-wool, and allow them to dry. When required for use, a small piece may be snipped off and slightly warmed, when it can be inserted into the hollow tooth, where it will solidify. The ease produced by this simple method is really very great."

Progress of Medical Science.

TREATMENT OF FISTULA IN ANO.—Dr. Poingt claims that any fistula amenable to treatment by the elastic ligature may be cured by simple drainage of the fistulous tract. The drainage-tube is inserted by means of a stylet passed up the tract from the external opening. At the end of two or three weeks the drainage-tube falls out, after having destroyed the superficial wall of the fistula. A granulating surface of small extent is left, which rapidly heals by cicatrization. The procedure is wholly painless, and the patient may pursue his ordinary avocations during the entire course of the treatment. The operation is never followed by any of those serious complications sometimes seen after the cutting operation.—*Le Courrier Médical*, July 28, 1883.

TREATMENT OF PSEUDARTHROSIS OF THE TIBIA.—Dr. F. Guermonprez relates in the *Bulletin Général de Thérapeutique*, July 30, 1883, a case of ununited fracture of the tibia cured by means of successive slight irritations of the opposing surfaces of bone, occasioned by the moderate use of the member. He concludes that in cases of this kind walking within appropriate limits is not injurious, and may even be conducive to a cure. The limb is to be steadied during use by means of stiff, well-fitting splints closely bandaged to the parts.

DECOCTION OF LEMON IN THE TREATMENT OF INTERMITTENT FEVER.—Dr. Maghen states in the *Giornale di Clinica e Terapia* for March, 1883, that he has obtained excellent results in the treatment of intermittent fever and the malarial cachexia by a decoction of lemons. The remedy was recommended to him by another physician, and he tried it first in some old inveterate cases, without, however, anticipating any remarkable results. The decoction is prepared as follows: A lemon, as fresh as can be obtained, is cut up into small pieces and put into an earthen vessel. Three glassfuls of water are poured in and boiled down to one glassful, which is then to be strained through a linen cloth and cooled in the open air. As a result of his trials of this remedy, the author arrives at the following conclusions: 1. Decoction of lemon, employed in malarial affections, gives results equal, and even superior, to those obtained from quinine. 2. It not only cures when quinine does, but even in those cases in which the latter remedy is useless. 3. It is equally effective in cases of chronic malarial cachexia. 4. It presents none of the disadvantages of quinine (irritation of the mucous membranes and tinnitus aurium). 5. Its administration is possible even in catarrhal conditions of the digestive tracts. 6. In addition to these advantages it possesses the further recommendation of cheapness. In commenting upon these conclusions, Dr. Kahn (*Bulletin Général de Thérapeutique*, July 30, 1883) states that the natives of French Guiana employ with success the decoction of lemons to ward off a threatened attack of chills and fever.

PRIMARY PEPTONURIC DIABETES.—Dr. Quinquard describes in *La Tribune Médicale* of August 5, 1883, a morbid condition, characterized often by emaciation, thirst, polyuria, and marked cachexia. Examination of the urine shows it to be of low specific gravity, abundant in quantity, not precipitating by heat or nitric acid, but deviating the plane of polarization to the left. Millon's reagent produces an intense red coloration, and a precipitate is thrown down by tannin, mercuric chloride, chlorine, and iodine. All these reactions denote the presence of peptones. The urine should be examined immediately after having been voided. The subjects of this condition present the same clinical picture as do those suffering from diabetes mellitus. The cause is not always easily determined, though a sudden chill or lively emotions may be mentioned as probable causes. There is a defect of assimilation, from which ensues a general disease, a true dystrophy. It is well known that peptones are excreted by the kidneys under certain circumstances, the condition being then a secondary peptonuria. But the cases seen by the author are stated to have been instances of primary peptonuria. There is another condition also in which peptonuria supervenes upon true diabetes mellitus, but this is very different from the disease under consideration.

ANTISEPSIS IN OVARIOTOMY AND BATTEY'S OPERATION.—In an article with the above title, appearing in the *Virginia Medical Monthly* for August, 1883, Dr. Battey presents the records of eighteen consecutive cases of ovariotomy and of Battey's operation. They were performed under strict antiseptic precautions, including the spray, and all terminated in recovery. While not believing that the spray or the use of carbolic acid in general is essential to success, the author thinks that weak solutions can do no harm, and that their use may serve to guard the patient against any slight imperfections in the details of cleansing. And he therefore says that he is content to hold them as valuable assistants in abdominal surgery until their utter uselessness has been more conclusively shown. He further says that his experience has been uniform upon one point, namely: that when a patient has been operated upon at her home and left to the care of her family physician, convalescence has been unduly slow and unsatisfactory.

RECTAL ADMINISTRATION OF SALINES.—The following is the plan pursued by Dr. W. Jaworski in the treatment of disorders of the large intestine (*Memorabilien*, July 16, 1883): In cases in which there is irregular action of the bowels (constipation alternating with diarrhœa, or either of these conditions alone), when palpitation reveals the presence of impacted fecal matters and points of tenderness in the large intestine, and when the stools are mixed with mucus, he uses injections of a two and a half per cent. solution of soda of increasing temperature. An ounce and a half of ordinary crystallized soda is dissolved in three pints of warm rain water, and as much of this as possible is injected into the rectum, and retained by the patient for about five minutes. This is done every day, at least five injections being practised. They have the effect of cleaning the bowel of the masses of mucus. Then at least five more injections are given of the same solution, with the addition of a tablespoonful of common salt. These are given only every second day. After the rectum has been well cleaned, and little or no mucus is seen in the stools, the author uses enemata of warmed Karlsbad water, to every bottle of which, in cases of obstinate constipation, a tablespoonful of sulphate of soda is added. It is advisable during the treatment by enemata, to intermit for several days at a time in order to ascertain what progress has been made. Where there is atony of the rectum it is well to give injections of pure cold water, with or without the addition of common salt, and these are recommended also in the after-treatment. The diet should consist chiefly of meat and milk. In cases of habitual constipation, without catarrh or any apparent lesion of the large intestine, the author begins at once with enemata of sulphate of soda. The first injections are warmed, and contain about two tablespoonfuls of Glauber's salt in three pints of water. Instead of pure water, the salts may be dissolved in Karlsbad water with advantage. Each day the water is used colder, and chloride of sodium is usually added to it. A mixed diet (excluding starchy food) is ordered. When a clearing-out of the entire intestinal tract is sought, a glass or two of cold soda-water, with a little sour wine, is ordered. In feverish conditions, or when the stools contain streaks of blood, very cold solutions of Glauber's salt and chloride of sodium are advised. The advantages of the rectal administration of the salines are summed up by Dr. Jaworski as follows: 1. The patient is spared the disagreeable taste and the nausea so often following the taking of salines. 2. Such a strict regulation of the diet is unnecessary, and the

salts may be given even after a full meal. 3. The entire intestinal tract is not uselessly irritated, but the remedy is locally applied, and acts for the most part only on the diseased portion. 4. The dose can be more easily regulated, for when salines are given by the mouth, the amount that reaches the rectum or acts upon it in any way is a very uncertain quantity. 5. The local effects of heat or cold may be obtained, together with those of the medicinês employed, when the latter are given by enema.

Cephalalgia of Adolescence.—Dr. R. Blache describes a form of headache, of not infrequent occurrence in individuals of either sex from twelve to eighteen years of age, which he thinks is deserving of recognition as a distinct morbid entity. It is not constant, but recurs with great frequency, and is evidently increased by mental effort. The pathogenesis of this form of cephalalgia he sees in a complex of altered nervous function, disturbances of the circulation, intellectual effort, and insufficient aëration acting during the period of puberty. The treatment consists in an active life in the open air, the use of suitable glasses if there are any defects of vision, and, above all, the absolute cessation from all mental work during a prolonged period.—*Archives Médicales Belges*, July, 1883.

Retarded Union of Fractures in Diabetes.—In a communication addressed to the Academy of Medicine of Paris (*Bulletin de l'Académie*, July 29, 1883), Dr. Verneuil related the histories of several cases in which the union of fractures occurring in diabetic subjects was delayed, imperfect, or entirely absent. He referred to the theory of Bouchard, who classes diabetes among the disorders attributable to a retardation of the nutritive processes, and he thought that the cases observed by him were corroborative of this view. For the repair of wounded tissues is a form of nutrition, and any delay or fault in the reparative process implies a corresponding defect in the function of nutrition.

A Case of Amaurosis Treated by the Percuteur.—There is a little instrument, called the percuteur, recently invented by Dr. Mortimer Granville, by means of which a number of taps in regular and very rapid succession, and of varying intensity, can be given to any part of the surface of the body. Dr. Granville's theory of pain is that it is due to abnormal vibrations in a sensory nerve, and he explains the action of the percuteur in the cure of pain and of other symptoms by the theory that it induces a new and orderly set of vibrations in the nerves to which it is applied. Dr. W. Carter relates a case in the *Liverpool Medico-Chirurgical Journal* for July, 1883, in which the application of this instrument was followed by the most striking benefit. He is not prepared to accept Dr. Granville's theory of the action of the percuteur, nor is he inclined to assert positively that his case was cured by it, but leaves his readers to form their own conclusions. The patient was a man forty-five years of age, of excellent physique, free from any taint of syphilis or hereditary disease. About five weeks previously he was seized, without any premonitory symptoms, with a headache, located chiefly in the temples. The following day the pain was worse, and was accompanied by a little chilliness and general malaise. Several times during this day he observed a dimness in the right eye. On the next day he was forced to go to bed by the severity of the pain in the head. On the fourth day he was totally blind, and experienced great pain in the eyeballs when moving them from side to side, but not when he moved them up and down. By the end of the week all pain in the head and eyes had disappeared, but the amaurosis persisted. Several careful ophthalmoscopic examinations revealed no abnormality. The pupils were dilated and but slightly responsive to light. Leeches were applied behind the ear, and iodide of potassium and solution of the perchloride of mercury were administered internally. His condition remaining unchanged, Dr. Carter directed that the percuteur be applied daily for five minutes to the eyeballs and temples respectively. At the end of a week the patient was able to pick his way through the ward without assistance, and at the expiration of a month was able to read coarse print and to walk briskly through a crowded street without a guide. He was again submitted to an ophthalmoscopic examination, when it was discovered that he had commencing cataract in each eye. The author, while feeling no more certain that this lesion was a result of the treatment than that the restoration of sight was attributable to the same agency, is yet inclined to think that the rapidly successive taps on the globe of the eye so modified the structure of the lens as to lead to the production of cataract.

The Variation and Disappearance of Cardiac Murmurs.—Dr. E. Hyla Greves writes in the Liverpool *Medico-Chirurgical Journal* for July, 1883, concerning the variations and changes so often observed in certain cardiac murmurs, dependent on definite organic lesions. He relates the histories of several cases, from a study of which he draws the following conclusions: 1. Although murmurs are among the most constant of the physical signs of heart disease, still their presence does not necessarily indicate the existence of incurable lesions, nor their absence that such lesions are not present. In forming a correct diagnosis and prognosis of any case, therefore, too much reliance must not be placed upon the presence or absence of murmurs, but other symptoms must receive careful consideration, for often on them alone is it possible to form a correct diagnosis. 2. The presystolic murmur of mitral stenosis, the most typical of all murmurs, occasionally disappears, the lesion still remaining. Mitral regurgitant murmurs, when due to simple relaxation of the heart's muscle, and dilatation of its cavities and orifices, as in chlorosis and general febrile conditions, in most cases completely disappear under appropriate treatment. 3. Tricuspid regurgitation is occasionally a temporary condition, due to bronchitis, etc., and when the cause is removed this condition is recovered from, as is indicated by the disappearance of the murmurs. 4. Aortic systolic murmurs, due to a permanent lesion at the aortic orifice, may undergo changes in their intensity, but never completely disappear. 5. Aortic diastolic murmurs in certain extremely rare cases have been known to disappear. In these cases a systolic aortic bruit is always present and remains persistent, thus indicating the existence of the lesion. 6. Pulmonary systolic murmurs are persistent when due to an organic lesion; but if non-organic, may disappear temporarily or permanently.

Removal of Wens without the Knife.—Dr. Carreaux removed a fatty tumor the size of a pigeon's egg from a young girl's foot by the following method, recommended to him by an old lady of his acquaintance. Frictions were made three times a day over the tumor by a mixture containing equal parts of hydrochloric acid and turpentine. The application was prolonged until the patient complained of a severe smarting. Then a plaster of hyoscyamus and mercurial ointment was spread over the part. The applications were made in this manner for eight or ten days, when signs of commencing inflammation appeared. They were then discontinued. A slight eschar formed at the most prominent part of the tumor, and being thrown off, left a small opening through which the contents of the tumor were gradually extruded. When the sac was empty the walls became adherent through inflammatory exudations, and the cure was complete in a month or six weeks. The author regards this method as of value when the patients dread the knife, and when the tumor is small, but advises against its employment in the case of large tumors, owing to the danger of septicæmia arising from suppurative inflammation of the walls of the sac.—*Journal de Médecine de Paris*, August 11, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, September 29, 1883.

THE PREVALENCE OF TYPHOID FEVER.

THE Sanitary Superintendent, Dr. Walter DeF. Day, has submitted to the Board of Health a report on typhoid fever as it at present exists in this city, which, though brief, contains points worthy the careful attention alike of the medical profession and the public. It is gratifying to learn that this disease is now being carefully studied by the sanitary authorities with a view to its causation, the degree of its contagiousness, and the prophylactic measures best calculated to control its prevalence; and although the report now before us is only preliminary, the importance of care in the disinfecting and removal of excreta is plainly shown. Where, in repeated instances, there being no sanitary defects to account for it, five or six cases have occurred in one family coincident with neglect in the disinfecting and removal of excreta and soiled clothing—these having been allowed to remain for hours, throwing off their exhalations to be breathed by the sick and well housed together—there appears to have prevailed either lamentable ignorance or gross carelessness in the use of simple preventive measures. The theory of typhoid fever being communicated through the discharges from a patient suffering with the disease is now generally accepted, and on this subject the public should be informed. It is clearly the duty of every medical man to do something more than advise disinfection in a general way. He should explain fully just what is necessary to be done, and the best manner of doing it if he would accomplish without exception the entire object of his mission.

The increase in the number of cases of typhoid fever daily reported to the Sanitary Bureau during the present season is assuming a grave importance. We learn from Dr. Day's report that during the month of July there were 93 cases reported, against 40 for July, 1882, and in August there were 244, against 96 in August, 1882, while to all appearance we shall probably have during the month of September some 300 cases, against 117 during the corresponding month of last year.

The question very naturally arises, To what is due this rapid increase of the disease during a season otherwise remarkably healthy, and in a city where so much has been done to improve the sanitary condition of dwellings and their surroundings? We do not remember the time when our city has been in a better condition as regards general cleanliness than at present, and yet cases of what is especially regarded as a filth disease are daily increasing in frequency. May it be in any degree due to the scarcity of water and a consequent deficiency in the flushing of our house-drains and sewers? Is our drinking-water or the milk we use contaminated with typhoid poison, or are there meteorological conditions which we do not fully understand influencing the course and type of disease?

We find upon inquiry that our city is not alone the object of this visitation. We hear of the same disease existing on all sides of us in different portions of the country. Of the 250 cases reported to the Sanitary Bureau from September 1st to the 24th inclusive, we learn that 35 came from the country, and from almost as many directions. We also learn that on railroad and other works in different portions of our State, where large numbers of laborers are employed who live in crowded barracks, typhoid fever has appeared in a very serious form.

These facts seem to point to the conclusion that this tendency to enteric affections is largely influenced by some general atmospheric or telluric causes rather than to local conditions, and yet when such general tendency exists, the disease, whatever it may be, is sure to locate and spread among localities where cleanliness is neglected and sanitary arrangements are defective. Hence the importance of careful and thorough inspections, not only of places where typhoid fever has appeared, but all places where sanitary defects may be found, with a view to correcting these defects and preventing disease. The physician, if he will, can do much toward aiding the Board of Health in this work, by promptly reporting his cases, and giving all necessary instructions to the family in each case, in regard to disinfectants and the general sanitary care of the sick and well. He cannot too strongly insist on the importance of absolute cleanliness, the immediate disinfecting and removal of all excreta, and if he is not familiar with the most approved disinfectants and the method of using them, he should lose no time in acquiring the requisite information. The activity previously displayed by the Board of Health in combating small-pox and typhus fever, and the success which attended its efforts, give us reason to hope that the problem how to stamp out typhoid may yet be solved.

THE MEDICAL COLLEGES AT FORT WAYNE.

WE have received a number of letters from reputable physicians living in Indiana, regarding the medical institutions at Fort Wayne, in that State.

It appears that there have been two colleges in that city, the Medical College of Fort Wayne and the Fort Wayne College of Medicine. The former was the older, and during its six years' existence it made some effort to establish a good standard of education. Its ambition and prosperity were cut short, however, by the establishment of the Fort Wayne College of Medicine. The new institution was rejected by the American Medical College Association on the ground that it "taught immorality." It was subsequently declared a nuisance by the Mayor's Court of the City of Fort Wayne. Following this, there appeared an annual announcement of the college in question, with an "especial notice," which is at once so ingenious in character and elastic in function that we print it entire:

"Inasmuch as this college is *not* a member of the 'Association of American Medical Colleges,' the Faculty desires to have it explicitly understood that it is in no respect bound by any of the regulations of that association; that our requirements for an admission to a final examination for the degree are entirely within the control and discretion of the faculty, and not governed by any arbitrary dicta; and that these requirements are substantially as follows, subject to any *desirable alteration*."

The opportunities for "desirable alterations" are then succinctly enumerated.

Before opposition like this the Medical College of Fort Wayne, to its credit be it said, collapsed, the loss not being probably a great one to the higher educational interests.

In the present status of affairs, it is unlikely that the earnest student of medicine will travel to Fort Wayne for educational purposes.

FISH AS FOOD, AND THE UNITED STATES FISH COMMISSION.

In a lecture recently delivered by Dr. B. W. Richardson, at a meeting convened by the British Fish League, the speaker said that the elements required for the sustentation of healthy life were the flesh-building, the force- or heat-producing, the mineral, and the watery. Most fish contained all these necessary constituents, some more than others. Pollack held all the necessary qualities very equally balanced. But the strongest and most nutritive fish was sturgeon, which equalled in all the essentials the best flesh meats. The speaker thought it was a question whether fish could not be made generally as nutritive as flesh meats, and he suggested that the Government should institute an analytical commission on the subject.

We have sometimes wondered why the United States Fish Commission, with its numerous corps of learned professors, has not made some careful investigations into the exact food value of fish. Fish is certainly not so good a food as flesh, and never can be entirely substituted for it. It has more water than the ordinary meats, or than game, and contains more inorganic salts in proportion to the solids than flesh. Further, it has a small amount of non-nitrogenous matters, and its nutritive ratio is as 1.2 to 1, when the ratio in normal diet is about as 1 to $3\frac{1}{2}$, and the ratio in beef is as 1 to $1\frac{1}{8}$.

According to Landois, the nutritive constituents of the different kinds of foods are as follows:

	Beef.	Pork.	Fowl.	Fish.	Hens' Eggs.	Wheat Bread.
Water	62.	55.	73.	76.	73.5	41.3
Albumen	12.	6.	19.5	12.	13.5	6.3
Albuminoids	3.	5.	1.3	4.		
Non-nitrogenous	20.5	33.	4.7	6.	12.	51.
Salts	2.5	1.	1.3	2.	1.	1.4

The analysis given of fish, however, can only be considered to represent a few kinds. There are great differences in food value among the various forms of fish. Some accurate chemical analyses would be of great interest in studying the question of food fishes. It is very well agreed that a fish diet may cause disease as well as support life, that some tribes seem to degenerate and others to thrive upon this kind of food.

HOW BEQUESTS TO HOSPITALS MAY BE DIVERTED

A curious case has just been decided in Chicago adversely to the claims of the Woman's Hospital of the State of Illinois, and the Chicago Hospital for Women and Children, and aside from this point, which would make it interesting to medical men, it is remarkable as illustrating the fact that the intentions of testators are often absolutely frustrated.

In 1876 Miss Julia R. Newberry died in Chicago, leaving a will, in which was the following provision: "In event I die unmarried, leaving my mother surviving, I devise and bequeath to her all my property, both real and personal, of every kind and nature, upon the express condition, however, that she devise by will, to be executed before receiving this bequest, so much thereof as shall remain undisposed of or unspent at the time of her decease, to such charitable institution for women in said city of Chicago as she may select." After the death of Miss Newberry, her mother refused to take the property subject to this condition, saying that this refusal made the will of no account, and claiming the property as the only heir-at-law.

Under these circumstances the Woman's Hospital of the State of Illinois, and the Chicago Hospital for Women and Children, each claimed that they were properly designated by Miss Newberry in her will, and asked that a trust be declared in the property in their favor.

Upon the trial the Court did not decide as to the legality of the claim of Mrs. Newberry, but decided that the hospitals had no rights, as the making of a will in their favor was a condition precedent to Mrs. Newberry's taking under the will, and as she refused to take there was no ground upon which to rest their claim.

It was also held that the bequest in favor of some institution for women was uncertain and could not be upheld, for it was a matter of doubt whether there would be any property left at Mrs. Newberry's death. The whole case is an illustration of the uncertainty which hangs about even an apparently plain provision in a will.

THE PROPHYLACTIC WORTHLESSNESS OF COPPER.

Apropos of some recent correspondence on a theory advanced by Dr. Burq concerning the immunity of workers in copper from contagious diseases, it may be of interest to cite the views of Dr. Bailly upon the same subject. At a late meeting of the Academy of Medicine of Paris, this gentleman protested in vigorous terms against the theory of Dr. Burq, and denied that there was any prophylactic virtue at all in copper. In fact, he seemed to regard it as an excellent microbe stimulant, and to incline to the opinion that these invisible but deadly organisms waxed fat and strong under its tonic influence. He stated that at Bornel and Ercuis, in the valley of the Esche, and at the neighboring hamlet of Chambly more than five hundred workmen are employed in the manufacture of various articles from *alféniде*, an alloy containing ninety per cent. of copper. Yet typhoid fever is almost endemic in this valley, while the neighboring plateau, where Chambly is situated, is practically exempt. Out of fifty-three cases of this disease seen by M. Bailly in this locality, twenty-six occurred among the copper-workers, and of four deaths, all were

among the workmen, who should, according to M. Burq, have been protected by the nature of their occupation. Similar facts were observed, he alleged, in the case of other diseases. In 1832 Chambly was decimated by the cholera, while Bornel, lying but a short distance away, escaped the visitation entirely. This would, at first sight, seem to be an argument in favor of the prophylactic value of copper; but, unfortunately for the theory, the *alféniде* works were not then in existence.

The communication, made by M. Burq to the Academy of Medicine a short time ago, attracted considerable attention, and his conclusions were widely copied by the public press on both sides of the water. The facts were convincing as far as they went, and the theory was so fascinating in its simplicity, and was fathered by so eminent an authority, that it speedily won its way to the hearts, if not the intellect of the people. It would be so easy to wear a plate of copper under the clothing, and then bid defiance to all epidemics. And the practice would, furthermore, have an immense advantage over that of carrying a buckeye in the pocket as a preventive of rheumatism, for it would rest on a scientific basis, and would have the very best medical endorsement. Indeed we are surprised that the vacuum in the advertising columns of our religious contemporaries, caused by Miss Lydia Pinkham's early demise, has not already been filled by testimonials of wonderful escapes from the measles of children wearing the copper pad. But we have not long to wait before the copper pad appears, or else our faith in Yankee enterprise is vain. M. Bailly comes too late with his cold, hard facts, and while perhaps he may succeed in dismounting Dr. Burq from his cupric hobby, he will never be able to convince the world at large that he has done so.

A DANIEL COME TO JUDGMENT.

A GREAT reformer has arisen; an instructor of purblind humanity in the ways of correct hygiene; a rebuker of his medical brethren. *The Popular Science Monthly*, supremely devoted to the inculcation of scientific truths, and the promoter of scientific habits of thought, is the medium whereby the lucubrations of this new apostle of medicine (as it should be) are communicated to the human race.

Our professor of the new gospel of *physic*—pardon us, we do not mean the nasty stuff which purges, and which he abhors, but the *art of healing*—is a vegetarian. Apparently under no circumstances and in no conditions would he recommend an invalid to eat meat. Here he has almost the entire weight of the medical profession against him, and the best physiologists; founded as are their beliefs on an experience which is overwhelming.[1] He is nothing daunted by this, however, and advises even the debilitated and the consumptive to eschew a flesh diet.

Our hygienist is, moreover, bitterly opposed to all medicines. For the asthmatic a "cold bath" is the most reliable remedy in the attack; no internal medication should be used. The dyspeptic should under no circumstances resort to drugs, "which only momentarily help one disease by inducing another." We are pleased to see in the last *Popular Science Monthly* quite an effective criticism on this therapeutic nonsense, by Dr. J. R. Black. "Only a person of superficial knowledge," says Dr. Black, "of strong physique, and bigoted withal, who judges all others by his own personal equation, could discourse thus. Men and women will eat and drink, either with or without knowledge, what they ought not, and as a consequence the stomach rebels, and intense suffering ensues. Only a short time since I saw a woman who had been writhing every few minutes with terrible gastric cramps for ten hours. Clearly it was an attack of acute dyspepsia. To the suggestion of an emetic she replied that a vomit nearly killed her. But another paroxysm of cramp led her to exclaim, 'Well, anything for relief!' In a few minutes she threw up nearly a gallon of fermenting food that filled her chamber with the fumes of a fetid sourness worse than that of an August swill-tub. Half an hour afterward she fell into a calm sleep. If humans will eat and drink what they ought not, eating not for need but for pleasure, not as a means but an end, the physician's duty is clearly to relieve suffering by the removal of its immediate cause, as by an emetic or cathartic." To this argument, illustrated as it is by an incident which happens in the every-day experience of physicians, Dr. Oswald makes no effective reply. In fact, no reply is possible.

So in regard to the treatment of constipation. It is not true that all our patients can attain a cure of this morbid condition by *dieting*. Not all our consumptives are in a condition, even in the early stages, to start off on an overland journey afoot to California!

As for the treatment of spasmodic asthma, it is not the experience of physicians that the inhalation of a little stramonium smoke produces after effects "worse than the disease." If any have seen the "vertigo," "heart spasms," and the "violent headaches," which Dr. Oswald describes, we certainly are strangers to such symptoms. Nor in practice do we think that it would generally be easy to induce our aged asthmatic patients to try the cold douche, albeit the best remedy, according to our writer. It would be an easy matter to review all of Dr. Oswald's writings and mark here, "fallacy;" there, "crude and not proven;" there, "impracticable."

There is much in these papers that is clever and interesting, and there are important hygienic lessons, but all is sadly marred by the dogmatical and paradoxical temperament of the writer, who is nothing if not a little "cranky." If the latter term seem a little harsh, we defend ourselves by saying once for all that we deem any man a "crank" who vehemently opposes the common-sense judgments and experience of mankind.

[1] See Lorget's Physiology, vol. i., page 104, for an exhaustive study of this subject, and a fair statement of the advantages of a mixed over a purely vegetable dietary. The facts adduced are startling and unanswerable.

THE ILLINOIS HEALTH BOARD AND THE AMERICAN MEDICAL ASSOCIATION.

IN the last quarterly report of the Illinois Health Board the Secretary, Dr. Rauch, gives an account of his experience at the meeting of the American Medical Association, which, as he says, he deemed it his duty for several reasons to attend.

The reasons for his attendance were made manifest by a discussion which occurred in the section on State Med-

CITY HOSPITAL

icine. At the conclusion of a paper by Dr. Johnson, members inquired how the reader could be a member of a mixed board and also of the American Medical Association. A spirited discussion of the question ensued, the propounders of the query not only holding that it was wholly inconsistent with the Code of Ethics of the American Medical Association, and that no one claiming allegiance to it could engage in licensing homœopaths and eclectics to practice without forfeiting its privileges, but implying that the tendency of the work of a board so composed was injurious professionally. Other members of the section strenuously opposed these views, and cited the admitted results of the board's labors as a sufficient refutation of the implied strictures. The chairman of the section, Dr. Pratt, finally disposed of the technical question by referring to the formal action of the Association when the same point was sought to be made against himself. Some years ago, in the preparation of a bill similar to the Illinois Medical Practice Act, he had, he said, met in a convention of representatives of the different schools in Michigan, including homœopaths and eclectics. For this he had been arraigned on a charge of violation of the Code. The Association then held that the Code of Ethics could not be violated by any action of a member which was necessary to the discharge of an official duty under the law, and that the fact of membership on a representative board did not come within the purview of the Code of the Association governing the professional relations of medical practitioners.

The decision of course settled the case of Drs. Johnson and Rauch. But it is apparent that the decision was really a concession forced upon the Association, and that it is not consistent with the stand which that body claims to assume. For what right has a regular Association physician *to take* a position where his official duties force him into consultation and communion with homœopaths! And one might very easily ask why the Association, if it excuses Dr. Rauch, should not also excuse a physician who consults with homœopaths in the discharge of a professional duty under the moral law, which many have thought more obligatory than the enactments of legislatures.

Now it is Fibrine and not Fat-Crystals.—Dr. R. Gregg, of Buffalo, has been conducting some experiments on bacteria, and publishes the following remarkable summary of his labors: By boiling a quantity of healthy blood he obtained all the forms of bacteria. Then, with some pure fibrine obtained from a washed clot of blood and boiling it, proving that it was the threads of fibrine broken up into pieces and granules that gave the bacteria, the same results were obtained. Next, some blood was obtained and rotted under warmth and closely watched for two months, and here again the forms were obtained that the fresh-boiled blood gave. From these experiments Dr. Gregg concludes that all the bacteria of disease are forms of fibrine, and for the general good requests all investigators to repeat the experimental work and report to the public the results of such investigations.

Professor Budge, of Greifswald, has recently celebrated his fiftieth jubilee. Numerous honors and congratulations were bestowed upon him.

News of the Week.

Births and Deaths in New York City and Its Tenement Houses.—Colonel Clark, Secretary of the City Health Board, made a statement recently before a Committee of the Legislature with reference to the excess of deaths over births in this city. He said the reason the statistics of deaths appeared to be so much larger proportionately than those of births was because there was no system by which a perfect registration of the births in the city could be obtained, and that one-third of the births at least were not registered. This fact accounted for the erroneous statement, made before the committee and frequently published, that the number of deaths exceeded the number of births in the city. The tenement-house population of the city—that is, the number living in buildings occupied by four or more families—aggregated eight hundred thousand, or a trifle more than one-half the entire population. The average number of tenement houses erected annually during the past three years was fifteen hundred. The city in its sanitary government was in advance of any city in the world, and it was also freer from small-pox and other contagious diseases than any other large city, and for that reason. Tenement houses were not so healthy as they might be, but their condition had been very greatly improved during the past few years, as property-owners found it beneficial to keep them in good condition, and now cooperated very generally with the Health Department authorities. The rules adopted here in relation to the plumbing of new buildings were now being adopted very generally in all the large cities of the country.

Professor Zeisse, of Vienna, Physician to the General Hospital, has been raised to the rank of nobility, upon the occasion of his retirement from active work. Zeisse has made many contributions to syphilology.

Dr. Bois-Reymond's Jubilee.—The twenty-fifth anniversary of Dr. Bois-Reymond's Professorship will be held in Berlin, October 25th. A bust of the eminent professor will be unveiled and a large number of his pupils will present commemorative scientific papers, which will appear in his *Archives*, forming a Jubilee volume.

Kairin, the New Anti-pyretic.—This drug has finally been put upon the market by a German firm, the price being 200 marks per kilogram, which is very much cheaper than quinine. Dr. Knipping, of Neuwied, has reported a successful experience with kairin in a case of puerperal fever.

Murder of a Western Physician.—Dr. A. B. McKune, of Council Bluffs, Ia., was shot and instantly killed by one Dr. E. D. Cross, of the same city. Dr. McKune was a well-known physician, member of the State and local Medical Societies.

Death from an Overdose of Morphine.—Joseph W. Pilkington, a medical student, died a few days ago in this city from morphine poisoning. He had been in the habit of taking morphine recklessly to control a malarial cephalalgia from which he frequently suffered, and it is supposed that he took too large a dose at last. It is not thought that the self-destruction was intentional, as there

was no apparent motive for suicide. Mr. Pilkington was twenty-two years old. He was a student in the Bellevue Hospital Medical College, his home was in Sedalia, Missouri.

SMALL-POX is reported to be prevailing to a large extent among the laborers on the Georgian section of the Canadian Railroad.

AN ANTI-CHOLERA PILL.—Dr. Fonquet, of Cairo, asserts that the following prescription is efficacious as a prophylactic against cholera :

℞. Asafœtid.,
Opii,
Camphor,
Papav. niger.....āā .06 gramme.
M. Ft. one pill.

THE MICROCOCCI OF CHOLERA.—Dr. Stephen Kartulis, Physician to the Greek Hospital at Alexandria, has found minute round and oval cocco-bacteria in the blood and discharges of cholera patients, also in some of the filthy drinking-water used in the infected districts.

DR. TOMSA, of Kiew, has been appointed Professor of Physiology at Prague.

AUSTRIA has in its seven universities 2,418 medical students. United States has in about ninety medical colleges some ten thousand students.

THE RUSSIAN CONGRESS OF PHYSICIANS AND NATURALISTS held its annual session at Odessa, beginning August 18th.

THE PARASITE OF YELLOW FEVER.—Dr. Dominga Frieze, a Brazilian physician, thinks that he has discovered a parasite in the blood of yellow fever which is the cause of the disease. Animals inoculated with it died of yellow fever.

THE COLLECTIVE INVESTIGATION OF DISEASE.—The collective method of investigating disease, which has been pursued with so much earnestness in England, has been adopted by the Berlin Society for Internal Medicine.

THE NATIONAL LONGEVITY UNION is the modest title of a sanitary society, which, says the *Medical and Surgical Reporter*, has been recently organized in Erie, Pa.

MEDICINE IN NEBRASKA.—We have received a catalogue containing the annual announcement of a new medical college at Lincoln, Neb. The educational opportunities are most comprehensive and inviting. There is no charge for tuition, and there is (or was) a regular, a homœopathic, and an eclectic faculty.

THREATENED EPIDEMIC OF TYPHOID FEVER.—The number of cases of typhoid fever in this city continues to increase weekly. The possibility of an epidemic is to be borne in mind.

DR. N. SAPOLSKI, an obstetrician, of Moscow, died recently of septicæmia contracted while attending a case of childbirth. He was one of the editors of the *Medisinskoje Obosrenje*, a monthly journal published in that city.

INSPECTION OF FURNISHED ROOMS IN PARIS.—The police department of Paris has, at the request of the Municipal Council, instituted a service of inspection of furnished lodgings. Five regular inspectors and four substitutes have been appointed at a salary of $600 per annum for the former and $25 per month for the latter. Each inspector must, on application, furnish a report upon the healthfulness of any lodging within forty-eight hours after the application is received. It is not stated whether the inspectors are medical men or not.

NIGHT MEDICAL SERVICE IN LEIPZIG.—The city of Leipzig has voted a yearly grant of $250 to provide for a night medical service. The fee, to be paid by the city in case the patient is unable to do so, is set at the modest sum of $1.50.

THE QUESTION OF CREMATION IN PARIS. — Acting upon the report presented by M. Brouardel, the Conseil d'Hygiène de la Seine has rejected the proposition to burn the bodies of those dying in time of epidemics, especially in an epidemic of cholera. The report stated that the interests of justice, as well as those of persons unjustly accused of poisoning, would be seriously compromised by the adoption of the practice of cremation, especially in the case of a cholera epidemic. It was said, further, that cremation would necessitate more handling of the bodies, and would therefore expose the living to greater danger up to the moment that the corpse was put into the furnace, than would interment. These objections were thought to overrule the obvious advantages of this method of the disposal of the dead, and the proposition was therefore rejected.

A RIVAL MEDICAL COLLEGE IN BEYROUTH. — The French have for some time been seeking to quietly extend their influence in Syria, with the view of ultimately assuming a protectorate over that country in the probable event of a disruption of the Ottoman Empire in the near future. As a further step in this plan, they are now about to establish a medical school with French professors in Beyrouth. One hundred and fifty thousand francs have already been expended in the acquisition of a suitable building and in the establishment of a chemical laboratory with all the necessary apparatus. The school is under the control of the French Government, and the professors have been selected from the Faculté de Médicine of Paris. The first session will commence in October.

WHOLESALE POISONING OF CONVICTS.—Over one hundred convicts in the Connecticut State Prison at Wethersfield were poisoned recently, it is supposed by eating some corned lamb. All those who ate of the lamb were seized with cramps and vomiting, while none were attacked who had not eaten the meat. The lamb was purchased of a Hartford butcher, and is thought to have been poisoned after leaving his shop. Ptomaïnes were probably the cause of the trouble. An analysis is to be made of both cooked and uncooked samples of the meat.

TYPHOID FEVER IN NEW YORK.—The city sanitary superintendent has made a report regarding the prevalence of typhoid fever in this city. He states that up to September 1st of this year, there were 539 cases, against 304 for the corresponding period last year. The disease is not confined to any particular locality, but is rather distributed generally over the city. Dr. Day calls attention to the neglect of proper disinfection in typhoid fever, as shown by the reports of the inspectors. The vital point in the sanitary treatment of typhoid fever is the effi-

cient disinfection of the clothing, bedding, etc., and whatever the board can do to impress this upon the medical profession of the city, particularly at this time, will be an important factor in controlling the disease during the approaching winter.

TYPHOID FEVER IN THE FRENCH ARMY.—An epidemic of typhoid fever of severe type has appeared in the military barracks of Mâcon, in the department of Saône et Loire, situated about forty miles from Lyons. The regiment quartered there has been transferred to camp at Cluny.

NOMINATIONS FOR OFFICERS OF THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—At the stated meeting held Monday evening, September 24th, the following nominations for officers for the ensuing year were made: Dr. Austin Flint, Jr., nominated as uncompromising adherents to the Code of Ethics of the American Medical Association, T. Gaillard Thomas, for President; Charles A. Leale, for Vice-President; E. A. Judson, for Secretary; P. Brynberg Porter, for Assistant Secretary; Henry D. Nicoll, for Treasurer; and Drs. Charles McBurney, Richard H. Derby, Charles S. Wood, Charles Hitchcock, and Thomas H. Burchard, for Censors.

Dr. F. R. Sturgis nominated for President Dr. S. Oakley Vander Poel, who was willing to represent those who were in favor of sustaining the State Medical Society in its action concerning the Code. Other nominations were made as follows: for Vice-President, Dr. Andrew H. Smith; Secretary, Dr. Wesley M. Carpenter; Assistant Secretary, Charles H. Avery; Treasurer, Orlando B. Douglas; and for Censors, Drs. F. R. Sturgis, David Webster, Daniel Lewis, F. R. S. Drake, and Joseph W. Howe.

SIR WILLIAM MACCORMAC and Dr. Lyon Playfair are visiting this country.

A CANADIAN PHYSICIAN TO BE KNIGHTED.—It is understood that Dr. Grant, who who has been the personal medical adviser of Princess Louise during her sojourn in Canada, will be knighted before the departure of the Princess for England.

YELLOW FEVER.—During the week ended September 15th there were eighteen deaths from yellow fever at Havana. Mr. E. E. White, United States Consular Agent for Ponce, Porto Rico, reports yellow fever prevailing in that city, especially among the foreign residents. Acting Assistant-Surgeon J. M. Main, of the Marine Hospital Service, reports one case of yellow fever in the City of Mexico, being an imported case. This, he states, is the second case which has occurred in the history of the city, the first case having occurred in 1865, a correspondent of the New York *Herald*, who died from fever contracted in Vera Cruz.

CHOLERA.—The Consul-General at Calcutta reports to the State Department that there were eleven deaths from cholera in Calcutta during the week ended August 4th, and twelve deaths during the week ended August 11, 1883.

During the week ended August 18, 1883, there was one death from cholera at Flushing, Netherlands.

In order to protect the Empire from introducing cholera now spreading in Egypt, the following measures have been adopted by the Government of Russia: In the ports of the Black Sea, beginning June 29th: 1, to keep under quarantine for two weeks all the vessels arriving at any Black Sea port which have no certificate showing that they are safe from cholera; 2, to keep under quarantine for a week all the vessels coming, with certificate of health, from the Straits of Constantinople and from the Anatoly Coast, and also those having been under quarantine in foreign ports; and 3, to have quarantine exclusively at Odessa, Kertch, Theodosia, and Batum. In the Baltic ports, beginning July 14th: 1, not to admit to our Baltic ports any vessel coming directly from Egypt, which will have no certificate showing that they have been submitted to quarantine on their way; 2, to submit to sanitary investigation all the vessels coming from the other places of the northern coast of Africa; and 3, to submit to quarantine for six days all the vessels mentioned above in case of any doubt.

NEWS FROM PASTEUR.—M. Pasteur has sent a despatch to M. Dumas, stating that the commission sent to study the cholera in Egypt has made some very interesting observations of a novel character, and which tend to support his preconceived theories. He promises to communicate the details by letter.

PRINCE BISMARCK AND HIS MEDICAL ADVISERS.—An item is going the rounds, taken from the *Allgemeine Wiener Medicinische Zeitung*, which shows the discomforts to medical men of waiting upon German princes. It appears that Bismarck has never cherished any feelings of regard for his medical attendants; at any rate, he has never given expression to them, and it has been his constant habit to dismiss them whenever the fancy took him. It has often enough happened that he has discharged a practitioner of ordinary medicine to take up with a "homœopath," and sometimes to have both kinds in attendance at the same time. As he has said, "The method of treatment is of less consequence to him than the result." Sometimes he has fixed a time for his attendant within which he has required to be cured, or at least rendered fit for work. If the result has met the requirement, the patient has been content, but he has never had a word of acknowledgment or thanks for his medical adviser. When he was Deputy in Frankfort he was attended by the then Regimentsarzt, now Director of the Imperial Health Office, Dr. Struck. When he was first in Friedrichsruhf, Dr. Cohn, of Hamburg, was his attendant. When in Varzin he had a third. In Kissingen he had consulted Dr. Diruf. His wife is a believer in homœopathy, as well as a trafficker in a nostrum (made from magpies' wings) for the cure of epilepsy, and for some reason—perhaps influenced by his wife—he was for several years under treatment by professors of the "School of Homœopathy." Three years ago he returned to the rationalists, and consulted Professor Frerichs, whom he had consulted many years before; but within a short time he had made another change, and called in the professional man under whose care he now is. The present favorite is a Dr. Schweningen, of Munich. This individual is a young man, thirty-three years of age, who, starting with brilliant prospects, has already succeeded in shutting himself out from relationships with most respectable families in consequence of

some indiscretion in connection with the wife of another medical man, one result of which was that both parties suffered a term of imprisonment. Bismarck, however, requires only medicine from his doctor, and the young man found his moral, or immoral, behavior no bar to the Prince's favor.

Bismarck suffers from sciatica and tic-douloureux; also from various gastric troubles, the result of his indiscretions.

THE AMERICAN PUBLIC HEALTH ASSOCIATION will hold its eleventh annual meeting at Detroit, Michigan, November 13th, 14th, 15th, and 16th. The following are the subjects chosen for special consideration:

1. *Malaria.*—Its etiology and the methods for its prevention in localities or in persons; its American history; its specific particles; its origin; the conditions of its pervasion; its laws of extension etc.

2. *Foods.*—Their adulterations; healthy or deleterious modes of preservation and the function of legislation in regard to them. Ascertained facts as to adulterations in this country. Facts as to canned goods, condensed milk, artificial butter and cheese, prepared meats, etc.

3. *Vital Statistics.*—Methods and results; defects apparent. How far foreign modes of tabulation are to be followed. Systems of collection and classification. Race vitality and the care of population as indicated by statistics.

4. *The Control and Removal of all Decomposable Material from Households.*—The mechanical laws, constructions, and appliances relative thereto. The construction of all inside pipes and their connections, their traps and siphonage, flushing, ventilation. How they shall be connected with out-door receptacles and yet be free from ill effect.

Reviews and Notices.

A SYSTEM OF SURGERY, THEORETICAL AND PRACTICAL, IN TREATISES BY VARIOUS AUTHORS. Edited by T. A. HOLMES, M.A., Cantab., Surgeon to St. George's Hospital, and J. W. HULKE, F.R.S., Surgeon to the Middlesex Hospital. Third English Edition. In three vols. New York: Wm. Wood & Co. 1883.

WITH the lapse of twelve years since the last edition of Holmes' System, numerous and important advances have been made in the science and practice of surgery. Within the period named new principles have been established and many questions heretofore considered of little moment in their bearings upon the salvation of life and limb have invited such extended discussion and called forth so many facts of experience that the conclusions based thereon have virtually marked the points of new and radical departures in treatment. Among these advances we may notice the influence which the antiseptic treatment of wounds has had upon the statistics of all operations, but particularly upon those in dangerous localities, and usually believed to be attended with extraordinary risks. Whatever may be the belief in the influence of antisepsis, in whole or in part, every progressive surgeon has learned the value of the cardinal principles of cleanliness, local disinfection, and free drainage. In the volumes before us these principles are duly considered, and the different points in dispute are very judiciously presented. The same may be said regarding other subjects of equal importance in their bearings on surgical operation. Those, for instance, connected with abdominal tumors and other affections of the abdominal cavity, nephrectomy, rapid lithotrity, operations upon joints; the pathology and treatment of injuries of the spine, and also the exhaustive discussion of the pathology of tumors, based more particularly upon the labors of the German pathologists, as well as a critical examination of the different advanced theories concerning the relations of septicæmia to pyæmia. Osteotomy as an operative procedure in the treatment of deformities is treated of at length, making, as it does, a new and decided advance over the more conservative and less effective methods formerly in vogue. So much for a general review of the marks of progress in an art as shown in this masterpiece.

The main features of the work are preserved, and the general arrangement is not materially altered. The several parts are naturally classified in regard not only to regions, but according to the apparatuses affected, giving the best possible opportunities for the thorough study of a given subject from a special standpoint. Many of the older authors have passed away, but in each instance their work remains and is brought up by accomplished editors to the present standard of positive advanced knowledge. It has been a pride with each author to do his part as well as possible, and nothing seems to be wanting to that end, taking into account the length of time required for the publication of the book and making allowance for such new facts as may have appeared in the meantime. Thus it naturally happens that the essay on gunshot injuries does not embody the experience of the late Egyptian campaign, a matter of no great importance, however, considering the other data upon which the article is founded. The latter remark would hardly apply in the same degree to the recent views on injuries of the back, which have been unavoidably omitted, and also as to many advances in the treatment of fractures, the remedying of deformities, and many operative methods which are peculiarly American. But the work as a whole, claiming as it does to represent the English school of surgery, is complete in every respect, and really stands without a rival. It is published in three volumes, instead of four as formerly, and presents an attractive typographical appearance. As it stands it represents the original and latest Holmes' System of Surgery, and contains the most recent views of the many distinguished authors who first contributed to its pages.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series. Vol. VI., 8vo, pp. 446. Philadelphia: P. Blakiston, Son & Co. 1883.

THE sixth volume of these transactions is unusually full of good scientific material and well represents the amount of working force in the membership of the College. It contains thirty-one original papers on different topics connected with medicine and surgery; all have a distinct practical bearing. It is published in its usual handsome style, and is a credit to the typographical art.

TRAINING SCHOOLS FOR NURSES, WITH NOTES OF TWENTY-TWO SCHOOLS. By W. G. THOMPSON, M.D. New York: G. P. Putnam's Sons. 1883.

THIS small pocket manual contains a general review of the nursing system in this country and abroad, with an account of the different American schools in active operation. It contains much useful information for all such as are interested in nurse-training.

THE PHYSICIAN HIMSELF AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS. By D. W. CATHELL, M.D. Third Edition. 8vo, pp. 208. Baltimore: Cushing & Bailey. 1883.

THIS readable and instructive book has, in a very short space of time, advanced to its third edition. It is full of valuable suggestions regarding the proper pecuniary and social relations which should be maintained between physician and patient. Every physician who is in doubt as to the course he should pursue in obtaining business and keeping it, will read the work with much profit.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Eighth Annual Meeting, held in Philadelphia, September 18, 19, and 20, 1883.

(Concluded from p. 328.)

THURSDAY, SEPTEMBER 20TH—THIRD DAY—MORNING SESSION.

THE Society was called to order by the President.

The first paper was by DR. H. F. CAMPBELL, of Augusta, Ga., on

MENSTRUATION AFTER EXTIRPATION OF THE OVARIES.

By general consent the influence of the ovaries in menstruation has long been recognized, and there was nothing in his paper which indicated that he would deprive them of their very important influence in connection with this function. Since the introduction of the operation of removal of diseased ovaries, it has been noticed that menstruation continues in some cases, and this has been variously attributed to habit, periodical plethora, and more recently to the fact that in removal of the ovaries the Fallopian tubes are not removed, and therefore the excitor of the menstrual nisus remains. The ovaries, unquestionably, are the ordinary excitors of menstruation. But are they the only excitors to activity in the genital organs? Certain cases were cited in which menstruation, lactation, etc., had been excited by irritation at some remote point, as from a parotiditis, suckling in the unimpregnated woman, etc. These cases showed that certain influences acting through the nervous system were efficient agents in establishing uterine and ovarian action. Pain follows amputation, not in the stump but in some portion of the part amputated, and because the nerve-centre has been adjusted and adapted to originating such a sensation, and may not periodical congestion and revival of the function of menstruation be the result of an original endowment of the nervous system continued for a time, although the organs which are ordinarily the excitors have been removed?

DR. GOODELL, of Philadelphia, was disposed to accept the view that this bloody discharge which, in some cases, follows removal of the ovaries, may depend occasionally upon irritation of some nervous centre. He had not removed both ovaries without forced menstruation appearing within the first *five* days, and he had attributed this to irritation set up by enclosed nerves. He was inclined to think that some of the ovarian structure was left behind in those cases in which so-called menstruation continued for any great length of time. It is often difficult to get the stump of the pedicle down sufficiently low not to leave ovarian structure.

DR. EMMET reported a case in which he removed both tubes and ovaries from a woman at the Woman's Hospital, eighteen months ago, and she has menstruated thirteen times regularly since the operation; the only change in the function being that the flow has continued for only about three days, whereas before the operation it lasted a much longer time.

DR. GARRIGUES, of New York, said that in studying these cases the exception should always be borne in mind—namely, the possibility of the existence of three ovaries. One exceedingly interesting case was on record, where, after removal of two ovaries, the woman bore a child.

DR. T. GAILLARD THOMAS, of New York, said he had not much to say on this subject for several reasons. First, scientific men have not reached an absolute decision concerning the influence of removal of the ovaries on the cessation of menstruation, nor as to the influence of the ovaries in the production of menstruation. He had removed both ovaries between fifty and sixty times, had followed the cases as well as possible, and had the impression left on his mind that when the ovaries are present menstruation is the rule, and after they have been removed menstruation is the exception. He regarded the bloody discharge which occurs after removal of both ovaries, as a metrostaxis. He did not recollect to have ever seen a case in which regular menstruation occurred for thirteen months after removal of both ovaries. In his cases the bloody discharge had been irregular, almost invariably of the character of a metrostaxis, usually disappearing after a short time, may continue five or six months, and in rare instances for one or two years. He had performed Tait's operation ten or twelve times, and there had been no difference in the result from that which followed Battey's operation. All the ovarian tissue is more likely to be removed in Tait's than in Battey's operation, and that is the probable reason why menstruation occurs less frequently after the former than after the latter. He thought Dr. Emmet's case might be accounted for as Dr. Garrigues had suggested, and sustained the suggestion by referring to a remarkable case occurring under his own observation, where he found a third ovary, having removed two, and allowed it to remain. He did not believe that the Fallopian tubes have anything to do with the excitation of menstruation; but with the performance of the function they have much to do. He had had but a single case in which there was a paroxysmal discharge of blood from the uterus after removal of both ovaries, and in that instance there was no such regular intervals as twenty-eight days between the times of the discharge, and there were none of the regular symptoms of menstruation.

DR MANN, of Buffalo, said this bloody discharge might be explained, occasionally, at least, by the existence of some disease of the uterus or vagina overlooked. He had had five cases in which both ovaries were removed, and in one there was metrostaxis, which continued for some time, and finally when he again saw the patient in consultation an examination revealed distinct cancer of the vagina.

DR. CAMPBELL said, in closing the discussion, that he did not wish to deny that the ovaries are the common excitors of menstruation, but merely to suggest may it not, after removal of the ovaries, be due to other causes than habit, periodical plethora, or the fact that the Fallopian tubes are not removed, and depend upon the action of some nerve-centre endowed to act, and continuing to act, for the performance of a certain function although the chief organs through which it manifests this power have been removed?

The Society then adjourned to meet at 3 P.M.

THIRD DAY—AFTERNOON SESSION.

The Society was called to order by the President, and the first paper was read by DR. WILLIAM H. BYFORD, of Chicago, entitled

REMARKS ON CHRONIC ABSCESS OF THE PELVIS.

The author of the paper spoke first of the different situations in which pelvic abscess may occur, the most common being in the connective tissue of the broad ligaments. He then called attention to the directions in which the pus is likely to discharge, the impediments with which it may meet, and which may change entirely the course of the discharge; to the quality of pus, laudable at first, but when the abscess becomes chronic containing an admixture of serum and blood. Dr. Byford studied with minuteness and detail the changes which occur in the lining membrane of a chronic pelvic abscess, at first like that of an external ulceration and finally the cavity is lined with cicatricial membrane, and with the loss of the granulation character of the inner surface pus is no longer produced. The changes occurring in the lining membrane might afford an indication for treatment. When in the granulating condition the granulations may become exuberant, and form fungoid masses,

and if these redundant masses are not removed they will give rise to and maintain pyæmic fever. In a chronic abscess, therefore, remove all these masses by scraping the inner surface with a dull curette or finger-nail; and there is no danger in this procedure, because the walls of the abscess are usually quite thick. A case, the notes of which had been furnished by Dr. D. T. Nelson, Adjunct Professor of Gynecology, was then reported, in which this method of treatment was adopted with excellent results. Dr. Byford discussed at some length the methods of opening these abscesses, the difficulties encountered and the liability to refilling unless the cavity or cavities have a free opening for the exit of the pus.

Dr. T. G. Thomas, of New York, thought Dr. Byford had rendered great service by examining minutely the internal surface of these cavities and following out the peculiar changes which take place. There was one point to which he wished to refer in connection with the subject in general, and that was concerning the propriety of *searching* for these abscesses. This point had been brought forward by the late Dr. Brickall, Dr. Mundé, and Dr. Lyman. He wished simply to say on this point, that he believed there is no more dangerous process in gynecology than to go seeking for these collections of pus. If it can be ascertained by conjoined manipulation that there is pretty positively pus in the pelvic areolar tissue, if we know exactly where to look for it, and if it can be distinctly discovered, then, and only then, should this exploration be made; but made without pretty positive knowledge on this point, very evil results will follow. He had employed the aspirator only as a means of diagnosis, and regarded it as a bad method of treatment, because a *free* opening should be made. His routine practice had come to be to cut into the abscess freely with Sims' long knife, and insert a small glass tube provided with a perforated flange so that it can be secured in position with sutures. When the abscess is large he stuffs the cavity with tow saturated with iodoform, repeats it in twenty-four hours, and thus goes on until cure is effected. He had not had any experience in the use of the curette, as recommended by Dr. Byford.

Dr. Goodell, of Philadelphia, regarded the method of treatment by the use of the curette as novel, but thought it might be an admirable way of effecting a cure. In the majority of instances the cases of pelvic abscesses he saw were of long standing, and there were more or less of fistulous openings. His method of treatment was first, if there is an opening from above, to pass in a long uterine sound and see if there can be established a communication with the vagina. If so, an opening is made, a drainage-tube inserted, and in that way he had succeeded in curing many patients. Other plans which he had tried had been irrigation with solutions of permanganate of potash, carbolic acid, etc., and injection with a much stronger solution of carbolic acid than is used for purposes of irrigation. With reference to aspiration, he had occasionally resorted to it, and while he was not satisfied that it is very good, he did not think it is quite so bad as Dr. Thomas was disposed to regard it.

Dr. Sutton, of Pittsburg, had seen Esmarch scrape out pelvic abscesses at his clinics in Kiel, and he thought that this clinic might be regarded as an exponent of the surgical clinics of Europe. But the curette was not used with the view of removing the long granulations mentioned by Dr. Byford.

Dr. Campbell, of Augusta, Ga., spoke of the special beneficial influence which the tartrate of iron and potassa exerted upon chronic abscesses. Except for the source from which the recommendation came with reference to curetting the inner surface of an abscess, he would not feel disposed to favor the plan.

Dr. Byford, in closing the discussion, said that the chief purpose of his paper was to call attention to a few points, and especially to the changes which take place in the lining membrane of chronic abscesses.

Dr. G. J. Engelmann, of St. Louis, then read a paper on

ERGOT: THE USE AND ABUSE OF THIS DANGEROUS DRUG.

He believed that it is never necessary to use ergot in obstetrics. The use of the drug he would limit to the non-pregnant womb. It is not the question how it may be used, but the fact that it is used very generally, and its bad effects are not appreciated which makes it desirable that it should be stated authoritatively that the drug does much more harm than good and that its use should be discarded entirely.

Dr. Johnson, of Washington, said that in his study of this subject he had been made aware of the fact that ergot is not used by physicians so generally and to the extent which he once thought it was, or to the extent which Dr. Engelmann says it is used. He had not found physicians who use the drug in the first stage of labor and thought that such a statement was erroneous.

Dr. Campbell invariably gave ergot after the birth of the child, and believed that it was important, and should almost always be used after the administration of chloroform.

Dr. Albert H. Smith, of Philadelphia, regarded the use of ergot in obstetric practice as an unmitigated evil. He did not believe that it is needed under any circumstances, and is always capable of doing harm, and generally does do harm. Its use in the third stage of labor might not be reprehensible, but in only a very few cases could it be used with benefit.

Dr. Elwood Wilson, of Philadelphia, was astonished that Dr. Engelmann should recommend the banishment of ergot from obstetric practice. He doubted very much if any man present would be willing to approach a case of placenta prævia without the use of ergot. He had seen thirty-two cases of placenta prævia, and had used ergot liberally and with excellent results. He was also surprised to hear Dr. Engelmann state that ergot was of no use in post-partum hemorrhage. Dr. Wilson regarded it as of immense use in this complication of labor. The difficulty is that the ergot is given too late and in too large doses. He regarded the use of ergot in the third stage of labor as very important, and had it at his command in all cases.

Dr. Engelmann said he feared he had been misunderstood. He did not mean to discuss the possible limits for the use of ergot, or refer to a scientific distinction for the proper indications for its use. He meant simply that it is a dangerous drug, does a vast amount of mischief, and from the fact that it is a powerful factor in stimulating uterine contraction, other measures less dangerous and which will accomplish the same end with equal efficiency should be substituted for it.

The following paper was read by title:

A THEORY TO EXPLAIN THE RELAXATION OF THE VAGINA AND PERINEUM DURING LABOR,

by Dr. James R. Chadwick, of Boston.

Dr. Goodell, of Philadelphia, offered complimentary resolutions concerning the efficient services of the retiring treasurer, Dr. Paul F. Mundé, which were unanimously adopted.

The President then introduced the President-elect, Dr. Albert H. Smith, of Philadelphia, who made a few appropriate remarks, after which the Society adjourned to meet in Chicago on the last Tuesday in September, 1884.

Better than Condurango.—It seems that New Orleans has been enlivened by the dean of a medical college there, who diagnosed and treated an ulcer of the gums about a young lady's tooth as cancer. Having failed to affect a cure, the case passed to a dentist, who extracted the tooth and let the "cancer" get well. A true victory for nature.—*St. Louis Med. Jour.*

Correspondence.

OUR PARIS LETTER.

THE THERAPEUTIC AND PROPHYLACTIC VIRTUES OF COPPER—REPORT OF THE FRENCH MEDICAL COMMISSION ON CHOLERA.

(From our Special Correspondent.)

PARIS, September 5, 1883.

AT the meeting of the Academy of Medicine of Paris, which was held on the 21st ult., Dr. Bailly read a paper giving an account of his experience of the therapeutic and prophylactic virtues of copper, as recommended by Dr. Burq, in various affections, particularly in cholera and typhoid fever, in which latter maladies the metal was considered to be a specific. Dr. Bailly is practising at Chambly, a small town in the Department of Oise, and I send you an abstract of his paper, which will at the same time serve, in some measure, as a reply to the interesting letter of Dr. Grace Peckham, headed "Copper and Cholera," and which was published in THE RECORD of August 18th. Dr. Bailly stated that the medication by copper was submitted by various physicians to serious trial during the cholera of 1866, and the results were so deplorable that it appeared that a method so deceiving was doomed, and that thenceforth it would be relegated to the arsenal of retrospective therapeutics as a mere object of curiosity. Dr. Burq, however, having revived the subject, Dr. Bailly thought it opportune to refute Dr. Burq's assertions with the following arguments:

At Chambly there are upward of five hundred persons employed in the manufacture of articles of "affénide," an alloy of which copper forms nine-tenths. If Dr. Burq's theories are correct, these people ought to enjoy a certain immunity against cholera or typhoid fever, but during the twelve years he has been in medical charge of the manufactory he has found that this is not the case. In an epidemic of typhoid fever Dr. Bailly attended 53 persons affected with the malady, of whom 26 were employed in the copper manufactory, and whose bodies were consequently well saturated with copper; of this number 4 died, all of whom were well "coppered." As regards cholera, Dr. Bailly states that in 1832 Chambly was decimated; of 1,400 inhabitants, 87 perished. In 1849, the new epidemic caused 47 victims. About a mile from Chambly, at a place called Bornel, there was not a single case of cholera, but this immunity could not be attributed to the virtues of copper, as at that time the copper manufactory that is now at the latter place did not then exist. Dr. Bailly enters into further details, which, for want of space, cannot be reproduced here. I must therefore refer Dr. Grace Peckham and others interested in the question to the Bulletins of the Academy of Medicine. I may, however, observe that Dr. Burq is perhaps singular in his theories, as I am not aware that metallotherapy, as he terms it, has made much progress in the profession, whether in this country or elsewhere, at least according to his ideal of the method. Indeed, the idea cannot be said to have originated with Dr. Burq; as, so far back as 1832, a Dr. Méray, of Paris, vaunted copper in cholera, and his report of the efficacy of the metal in this disease caused such a sensation that on inquiry it was found that the results were greatly exaggerated. No further importance was attached to the report and nothing more was heard of the marvellous effects of copper until about thirty years ago, when Dr. Burq took up the subject, and he has patronized it ever since, but, as I have already said, almost single-handed, for one never hears of its employment by any other practitioner, at least as recommended by Dr. Burq. At a previous meeting of the Academy of Sciences, Professor Vulpian was cited as one of the partisans of Dr. Burq's doctrine of metallotherapy, but as he was not present on the occasion he wrote a letter to the Academy repudiating such an imputation in the following terms: "No well-established clinical fact has authorized me to admit the preservative or curative influence of copper in the treatment of cholera. If copper had any real efficacy, it is probable that it would have been made known in all the countries where cholera reigns, and particularly in those parts of India where the malady is endemic." On another occasion, taking part in a debate on Dr. Burq's method of metallotherapy in hysteria and other nervous affections, Professor Vulpian stated that he was not able to speak more favorably of it in these cases. Dr. Burq has responded to Dr. Bailly's communication at the Academy of Medicine, but as he has advanced nothing new or important, I need not trouble your readers any further on the subject.

According to official information received from Egypt, the cholera is evidently on the decrease. The Council of Hygiene at Alexandria reports that the number of deaths from the disease during the two months that have elapsed since the outbreak of the epidemic, amounted to twenty-seven thousand among the natives, and one hundred and thirty among the English troops.

The French medical mission that was sent to Egypt to study the nature of cholera has reported that the disease with which it had to deal was incontestably Asiatic cholera, and that the discoveries already made are of a nature that will tend to subvert almost completely the theories in vogue as to its origin and pathology.

The theory of the contagious and parasitic nature of cholera is evidently gaining ground in the profession, but the following incidents would seem to militate against either idea. Among the passengers of the Peluse, condemned to quarantine at Alexandria, was an infant that had lost its mother from cholera, but the infant was not in the least affected, and was still alive and well when the vessel reached Marseilles, although it had been suckled by its mother within a few hours of her death. When the body of a sheik who fell a victim to the disease at Cairo was being prepared for the funeral a number of fanatic Mussulmans rushed up and drank of the water with which the body was washed. If the contagious or parasitic nature of cholera is correct, surely few or none of these people could have escaped contracting the disease.

ON THE THERAPEUTIC EFFECT OF IODOFORM AND ETHER IN THE TREATMENT OF SORE THROAT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I am tempted to ask a little space to call especial attention to two paragraphs of "foreign gleanings" that appeared in the last issue (September 8, 1883) of THE RECORD. They are the results of clinical observations on the part of experts, and their experience and statements confirm my own clinical observations and experience, published one year before either of the foreign contributions appeared in print.[1] While the title of my article refers only to ulcerated tonsils, the accounts of the cases cited gave full descriptions of sore and ulcerated surfaces of surrounding structures. The value of ether in combination with iodoform—to which I called attention—is now of additional interest to therapeutists. The testimony of the foreign observers forms a good addenda in support of my views and observations. "Ether in the treatment of sore throat: Professor Contalo employs an ether spray in the treatment of pharyngitis. Under its influence the temperature falls, the vessels contract, and the local condition is speedily improved. In two cases a fibrinous exudation was detached and not reproduced. Ether, according to the author, deserves a trial in pharyngeal diphtheria, not only as an antiseptic agent, but also because the pain is thereby greatly diminished, and the

[1] Clinical Observations on the Use and Value of Iodoform in the Treatment of Enlarged and Ulcerated Tonsils, New England Medical Monthly, June 15, 1882.

taking of nourishment facilitated." "A method of hastening the anæsthetic action of the ether spray: Dr. Vidal, at the Hôpital St. Louis, in Paris, shortens the duration of the process of congelation by the ether spray in the following manner: Making a slight prick with a needle at a point upon which the spray is directed. The little puncture made at this time excites a reflex constrictive action of the vaso-motor nerves, the blood is driven from the part, and the skin becomes white."

The observations and clinical experience of Drs. Contalo and Vidal account for and explain the rationale of the success which I have attained in the treatment of ulcerated and inflamed tonsils and inflammation of contiguous structures by the combined application of ether and iodoform in the form of spray. The value of iodoform in the treatment of inflamed and ulcerated surfaces is now too well known to need more than mention. The little punctures claimed by Dr. Vidal as "hastening the anæsthetic action of the ether spray" find a parallel in the ulcerated points of the inflamed surfaces, both of tonsils and surrounding mucous membranes. I think I am not exaggerating in claiming that iodoform and ether combined, and applied locally in the form of spray, may fairly be regarded as a specific in the treatment of sore and ulcerated throat, tonsils, and contiguous structures.

MORRIS H. HENRY.

581 FIFTH AVENUE, NEW YORK.

WHITE LEAD PAINT AS A LOCAL DRESSING IN ERYSIPELAS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue of April 14, 1883, an article from the *Lancet* urged the employment of white lead paint as a local dressing in erysipelas, and this article called forth several communications, all testifying to the usefulness of the carbonate of lead.

In the number of THE RECORD published on August 18th, another article, from the *Lyon Médical*, records four cases of erysipelas which were successfully treated with hypodermic injections of resorcin.

Unfavorable or negative results are seldom published, but the following cases, reported briefly from my notes, may not prove uninteresting, as the treatment includes the use of both of the remedies which are so highly spoken of. Although I had occasion to treat some thirty-five cases of erysipelas this summer, most of them were of the cellulo-cutaneous and cellular varieties, which demanded free and numerous incisions, and in which the depending upon milder measures would have led to disastrous results. Several of the cases, however, were of the cutaneous variety, and among these two seemed to present an opportunity for the fair trial of carbonate of lead. One of the two receiving also injections of resorcin.

CASE I.—Alice B——, aged thirty, who had been operated upon a week previously for the removal of enlarged lymphatic glands of the neck, was sent to the erysipelas ward on May 16, 1883, with a cutaneous erysipelas, which included the right ear, and which had extended anteriorly half way across the cheek, and posteriorly to the back of the neck; involving the integument as far down as the vertebra prominens. Blebs and vesicles had appeared only upon the helix of the ear when the disease had first manifested itself two days previously. The record of the vital signs is not of sufficient significance to be reported here. White lead paint, which I had carefully prepared myself with linseed oil, was spread thickly over the involved portions of the skin, and at the same time the following internal treatment was commenced: Tincture of the chloride of iron in half-drachm doses, well diluted with whiskey and with one-fourth of a grain of morphine added, every three hours. Five-grain doses of sulphate of quinine every three hours, and each dose to be given in the interval between two doses of the iron. Rochelle salt in sufficient quantity to keep the bowels open. It may be well to mention that the paint, after being applied, was covered with gutta-percha tissue for neatness sake.

May 17th.—Erysipelas showing no tendency to further extension. Pain very much less than yesterday.

May 18th.—Erysipelas limited. Little pain. Internal treatment stopped.

May 19th.—Erysipelas extending rapidly along the cheek, and upward on the scalp. Temperature elevated in the morning, but reduced promptly by sponge-baths and quinine. White paint applied to beyond margins of diseased area.

May 20th.—Erysipelas extending more slowly. Lead paint removed and internal treatment recommenced.

May 21st.—Erysipelas leaving the parts first attacked, but extending down the front and sides of the neck. Fomentations of hot lead and opium wash, and carbolic acid solution (1—40) in equal parts are employed locally.

May 22d.—Erysipelas decreasing at all points.

May 23d.—Improving with great rapidity.

May 28th.—Discharged cured.

CASE II.—Ann McC——, aged fifty-eight. Brought to the hospital on May 25, 1883, suffering from idiopathic cutaneous erysipelas. The patient is not rational and cannot give a reliable history.

The skin over the entire face, with the exception of the chin, is very much swollen, and hyperæmic. The ears are involved. Blebs and vesicles cover all of the diseased surface. Much constitutional disturbance exists. No local treatment is resorted to at first. The intended internal treatment is substantially the same as in case No. I. As patient has passed no urine for five or six hours after entering the hospital a catheter is inserted into the bladder, and an ounce and a half of turbid urine drawn. This urine is found to contain about fifty per cent. by volume of albumen, and a few granular casts.

The patient is now to take one drachm of bitartrate of potassium well diluted, and half an ounce of infusion of digitalis every four hours. And in case of a rebellious stomach poultices over the kidneys are to be substituted for the above.

May 26th.—Vital signs nearly normal. The erysipelas appears to be stationary. Less than three ounces of urine having been passed in the last twenty-four hours, dry cups are applied over the kidneys for fifteen minutes. Patient again cupped six hours later.

May 27th.—Vital signs normal, erysipelas stationary. Yesterday's cupping has been partially successful, as twenty-four ounces of urine have been passed in twenty-six hours. This urine, however, contains about sixty per cent. by volume of albumen, and is loaded with granular, epithelial, and hyaline casts. Blood is also present.

May 28th.—Erysipelas extending rapidly down the back of the neck. Vital signs *normal*. Urine in nearly normal amount since last note. The scalp, which is now œdematous, and the back of the neck, are enveloped in moist oakum, covered with oiled silk.

June 1st.—The erysipelas has rapidly departed from the face, but is travelling down the back with greater speed. The affected portions of skin to the left of the spinal column are painted over with tincture of iodine, and on the right side hypodermic injections of a five per cent. solution of resorcin are made into the subcutaneous connective tissues, in the hope of destroying the micrococci which fill the lymphatics in the advancing line of the disease. The injections, of two minims each, are made about a quarter of an inch apart, half an inch or more ahead of the whole advancing line on the right side of the spinal column, between the eighth dorsal vertebra and the right shoulder. There is now almost no urine excreted by the kidneys.

June 2d.—The erysipelas has continued straight on down the back without any check whatever from the local treatment. The affected portion of skin to the

right of the spinal column is covered with collodion, and a thick layer of white lead paint is spread upon the corresponding left side. Patient very stupid. Almost no urine.

June 3d.—The erysipelas has extended about two inches lower on each side of the spinal column, and is creeping toward the sides of the chest. All of the more recently diseased surface is washed with a saturated solution of sulphate of iron in the morning, and as the disease is still progressing at evening, collodion is substituted. There is probably as much reason in trying to control the local lesion as there would be in endeavoring to stop the eruption of scarlet fever by the use of the same remedies.

June 4th.—Patient dies quietly at 3 A.M. The result of the autopsy in this case was extremely interesting, but as it had no particular bearing upon the efficacy of white lead paint, or of resorcin, in controlling erysipelas, I will omit the description of it.

ROBERT T. MORRIS, M.D.

BELLEVUE HOSPITAL, NEW YORK CITY.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 15 to September 22, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon, Medical Director, Department of the South. Granted leave of absence for fifteen days. S. O. 94, par. 2, Department of the South, September 13, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. On being relieved from duty at the United States Military Academy, October 1, 1883, to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

ALEXANDER, CHARLES T., Major and Surgeon. Granted leave of absence for four months, from October 1, 1883. S. O. 213, par. 1, A. G. O., September 17, 1883.

GIBSON, JOSEPH R., Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report by letter to the Commanding General, Department of the South, for assignment to duty. S. O. 211, par. 7, A. G .O., September 14, 1883.

HORTON, SAMUEL M., Major and Surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MEACHAM, FRANK, Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

SMITH, ANDREW K., Major and Surgeon. Relieved from duty at Willett's Point, N. Y., October 1, 1883, and assigned to duty at U. S. Military Academy, West Point, N. Y. S. O. 211, par. 7, A. G. O., September 14, 1883.

TAYLOR, MORSE K., Major and Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Missouri, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

APPEL, DANIEL M., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MERRILL, JAMES C., Captain and Assistant Surgeon. Relieved from duty in the Department of Dakota, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MUNN, CURTIS E., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

MAUS, LOUIS M., Captain and Assistant Surgeon. Relieved from duty in the Department of the Missouri, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

PATZKI, JULIUS H., Captain and Assistant Surgeon. Relieved from duty in the Department of the South, October 1, 1883, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

PRICE, CURTIS E., Captain and Assistant Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of Dakota, for assignment to duty S. O. 211, par. 7, A. G. O., September 14, 1883.

VICKERY, RICHARD S., Captain and Assistant Surgeon. Relieved from duty in the Department of the Platte, October 1, 1883, and to report in person to the Commanding General, Department of the Columbia, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

WEISEL, DANIEL, Captain and Assistant Surgeon. Relieved from duty in the Department of the East, October 1, 1883, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 211, par. 7, A. G. O., September 14, 1883.

APPEL, AARON H., First Lieutenant and Assistant Surgeon. The leave of absence granted July 20, 1883, extended one month. S. O. 211, par. 10, A. G. O., September 14, 1883.

BREWSTER, WILLIAM B., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, from October 1, 1883, with permission to apply for an extension of four months. S. O. 107, par. 1, Military Division of the Missouri, September 15, 1883.

STRONG, NORTON, First Lieutenant and Assistant Surgeon. Now on duty in the field near Fort Thornburgh, Utah, to accompany command to Fort Douglas, Utah, and there await further orders. S. O. 101, par. 2, Department of the Platte, September 17, 1883.

SALICYLATE OF SODA IN PHLEGMASIA ALBA DOLENS.—Dr. Vigar has met with success in the treatment of several cases of milk leg by salicylate of soda. He gives it in doses of one drachm per diem. He states that in all the cases in which he has tried the remedy the patients were able to leave their beds in less than three weeks, and all recovered perfectly without any œdema or nodosities on the leg.—*El Siglo Médico.*

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending September 25, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 18, 1883.....	0	69	38	3	22	19	0	0
September 25, 1883.....	0	84	29	7	4	17	0	0
Deaths.								
September 18, 1883.....	0	13	14	3	2	14	0	0
September 25, 1883.....	0	12	2	5	2	12	0	0

REMOVAL OF KIDNEY AND GALL-BLADDER.—Dr. Langenbeck, at the recent meeting of the German Surgical Congress, showed a woman, aged thirty-four, from whom he had removed the gall-bladder successfully. Two years before she had had a floating kidney removed.

TREATMENT OF SIMPLE CHANCRE BY HEAT.—A member from Lyons read a communication before the Academie de Médecine on the treatment of simple chancre by heat. As the results of his experiments he was led to consider that the employment of an elevated temperature was an excellent means of annihilating the virus. The author recommended that a hip-bath should be given between 104° and 107°, and borne for several hours. He believed that this treatment would suffice to destroy the virus in twenty-four hours. In any case it was certainly the best treatment of phagedænism and those chancres complicated with phimosis that no dressing can attain. It is needless to add that the doctrine of M. Pasteur as to the cause of virulent diseases has suggested this treatment.—*Medical Press and Circular.*

INCISED WOUND OF THE KNEE-JOINT; PYARTHROSIS; ULCERATION OF THE ARTICULAR CARTILAGES; RECOVERY IN FIVE MONTHS.—Dr. R. C. Van Wyck, of Hopewell Junction, N. Y., sends us a carefully written history of a case of the above kind. The patient was a delicate, scrofulous boy, eleven and a half years of age. He accidentally received a deep transverse cut just above the left patella from the fall of an axe. The wound opened the knee-joint, but it was not attended to for over a week. Consequently suppuration set in, the opening healed, but the pus burrowed. A large abscess formed about the joint and finally penetrated it. Incisions had to be made on both sides of the joint and into the popliteal space in order to secure free drainage. Bed-sores developed, and the patient was reduced almost to a moribund condition. By free drainage, thorough cleansing of the wound, and proper diet, the patient began to improve. Dr. Van Wyck ascribes the favorable turn in the disease to the use of syrup of hypophosphites. As the boy convalesced a modified Stillman's splint was applied.

THE ETHER DOUCHE OR LAVEMENT FOR THE RELIEF OF PAIN.—Dr. C. H. Hughes speaks favorably of the use of lavements of ether for the relief of headaches and neuralgias.—*Medical Times.*

THE OATH WHICH THE GERMAN MIDWIFE IS OBLIGED TO TAKE is as follows: "I swear by the Almighty and Allknowing God, that I will practise the midwife's art to the best of my skill and ability, helping rich and poor with equal readiness. I will conduct myself as a true and conscientious midwife. So help me God!"

CHANGES IN THE STRENGTH OF SOME OF THE OFFICINAL PREPARATIONS IN THE NEW PHARMACOPŒIA.—The *Virginia Medical Monthly*, hearing that Dr. Squibb declines to follow the directions of the new Pharmacopœia regarding the strength of certain preparations, reads that gentleman a lecture. It says that "it looks over-officious in him to confront national opinion, confuse both doctor and druggist, and risk, perhaps, human life by obstinacy. By such a course as he is pursuing in this matter, he will do others injury, and himself no good. He will confuse everybody. If Dr. Squibb is *the* authority, let us authoritatively know it, as a profession; if the United States Pharmacopœia is the authority, let us be in accord on the subject where absolute harmony is essential. Because of such statements as he is making, or has published, and because of the action of local pharmaceutical societies throughout the country, we may do some good by suggesting to each doctor to ask his druggist whether he is following the revised U. S. Pharmacopœia or Dr. Squibb."

A HINT FOR NEW YORK CITY AUTHORITIES.—The municipal authorities of Berlin have adopted regulations forbidding the erection of houses over seventy-nine feet in height and having more than five lodging floors; at present they are built with seven or eight stories.

THE SURGERY OF VIENNA differs widely from that of America. There is not nearly so much acute surgery, if I may be allowed the expression; that is, fractures, dislocations, and general mash-ups are not common, due partly to the fact that the railroads are better managed than with us, the staging and scaffolding around buildings much more securely erected, the buildings themselves more substantially built, and partly, perhaps, to the fact that the people themselves are naturally cautious, and that as they are punished for being run over, they take pains to keep out of the way of vehicles. Tumors of all kinds, carious and tuberculous processes of the bones, deformities, joint diseases, and hernia, are very common.—*Cor. Maryland Med. Jour.*

TO DETECT ADULTERATIONS IN OLIVE OIL.—According to the *Moniteur de la Pharmacie* cotton-seed oil, when used as an adulteration or substitute for olive oil, may be detected by the following test: Put one part by weight of the oil to be tested in a test tube with two parts of pure colorless nitric acid, shake thoroughly for thirty seconds, and then let the test tube stand for five or six minutes. At the end of this time the oil will rise above the acid. If the olive oil is unadulterated it will be of a light gray color with a yellowish tinge, but cotton-seed oil will assume a dark brown, almost black, coffee color. Varying shades from a golden yellow to brown, according to the proportions of the admixture, will be produced in adulterated oil. By this method it is possible to detect the presence of five per cent. of cotton-seed oil.

THE RAPID INCREASE IN THE POPULATION OF CHICAGO.—In a paper read before the Chicago Medical Society and published in the *Medical Journal and Examiner* for September, 1883, Dr. Henry Ogdon reports the birth of five sets of triplets in that city within a period of five months. Not content with that, he supplements his paper with a report of two other cases of triplets born in the vicinity.

A PRACTICAL MEDICAL EXAMINATION.—The London *Medical News* relates an instance in which a candidate was treated with unusual consideration by his examiners. Requested by one of the latter to cut down on and tie the subclavian artery, the candidate did as directed, but could not at once find the vessel. Irritated, seemingly, by his failure, the examiner urged him to "Pick it up, sir; there it is, right under your nose," and on the candidate mildly suggesting that this particular structure was a cord of the brachial plexus, the second examiner present lifted it and divided a nerve. Examiner No. 1 then

at once repudiated having called this the artery, which, he affirmed, was another adjacent structure. Proceeding, therefore, to raise it and cut it through, he exhibited it in commencing triumph, which quickly collapsed as another nerve appeared in section. The candidate was passed.

How to Keep the Hypodermic Syringe in Order.—Dr. William H. Morse, of this city, describes the following method of keeping the hypodermic syringe in order. It is, he says, "the very best," the syringe being always ready and in good order even if it has not been used for months. The method, besides being simple, is inexpensive: "Unscrew the bowl of your syringe, take out the piston-rod, unscrew the *lower* piston *leather* and take it off, then put in its place a small piece of chamois skin, and replace the leather and screw it tight. Now trim the chamois to the size of the bowl, and replace the piston, and the work is done. You will observe that you have only placed a bit of chamois *between* the *two* piston leathers. You now have a syringe which is in working order the *moment* water is introduced."

A Curious Verdict in Regard to an Injury of the Eye.—In a recent case in a Pennsylvania court a large verdict was obtained for an injury to the eye, which had apparently healed, but which might possibly become serious. The judge said "the cornea of the plaintiff's eye was cut in three places, and the iris became attached to the lower branches of the corneal injury. The power of the eye was permanently weakened, but its condition has remained unchanged for the last twenty months, while subjected to the severest tests, aud during this time the plaintiff was able to work from eleven o'clock P.M. till seven o'clock A.M." Under these circumstances the Court held that a large verdict based upon a possible subsequent inflammation was excessive, and directed that a new trial should be had, where the actual and not the possible damage should be considered.

The Origin of Malaria.—Dr. Daniel Parker, of Calvert, Texas, sends us a communication in which he protests against the views recently enunciated by Dr. Charles P. Russel in The Record, in an article on "The Change of Medical Opinion in Regard to the Cause and Recent Extension of Malaria." He thinks that there are very few careful observers who will agree with the statement of Dr. Chadbourne, there quoted, that he "adhered to no opinion whatever, based upon sufficient facts to make it valuable, as to how malaria arises." Dr. Parker says: "The statement that malarial disease occurs where vegetable decomposition is, to any great extent, impossible, may be answered by saying that such places are probably influenced in this respect by atmospheric currents, water supply, or some at present unknown conditions, and that a thorough investigation of each locality in the light of its peculiar surroundings would be about as likely to prove as to disprove the time-honored theory. The counter-statement that 'very many more instances' exist 'where all the so-called conditions for the production of malaria have always been present without such poison having manifested itself,' may be reconciled by supposing that some factor, in addition to the simultaneous operation of air, heat, and moisture causing vegetable decomposition, is necessary for the production of malaria, or that in such localities certain conditions, with which we are at present unacquainted, exist prejudicial to the existence or activity of malarial poison. Neither of these explanations invalidates the accepted theory. If called on for facts in support of the theory in question, I should hardly know where to commence. The literature and experience of the profession teem with them. To say that exposure of the unacclimated to paludal emanations at certain seasons of the year, in certain localities, is followed by malarial disease, would convey much the same idea to any one of experience in such matters, as to say that exposure of the unprotected to yellow fever atmosphere is followed by yellow fever. The relation of cause to effect is not more marked in one instance than in the other. This is not a revelation of scientific or professional research, but a matter of common observation. A large majority of the intelligent laymen in malarial districts can predict with a near approach to certainty whether a given locality will be healthful or otherwise, and they will all base their prediction on the exposure or non-exposure of the particular locality to emanations arising from vegetable decomposition, as determined by proximity to swamps or alluvial lands, and influenced by atmospheric currents, elevation, etc. To say that no such thing as a malarial germ exists, because no one has seen such an object, is simply to say that in this direction research has attained its utmost limits, and that there is nothing more to be learned. This is cutting off investigation precisely where we have reason to hope for the grandest discoveries, and needs only to be mentioned to show how entirely it is opposed by the experience of the profession, and by the spirit of progress which animates such workers as Pasteur, Koch, Belfield, and others."

The Relief of Cramps.—A correspondent of the *British Medical Journal* suggests for the drug-treatment of painful cramps the following, subject to the peculiarities of the patient: Ext. hyoscyami, gr. iij.; camphoræ, gr. ij.; morphiæ bromidi, gr. $\frac{1}{12}$, in a pill at bedtime. This pill has succeeded perfectly in a recent case. Another correspondent suggests small doses of bichloride of soda.

Arsenic as a Prophylactic against Malaria.—Experiments have been carried out in Italy, under the direction of Tommasi-Crudeli, to ascertain the prophylactic value of arsenic against malaria. The results have, says a correspondent of the *British Medical Journal*, been quite favorable. The number of persons placed under arsenic was 455; 401 men and 54 women. Of these, 250 were victims of chronic malarial poisoning, 115 had been recently infected, and 90 were in fair health. There were cured, or, if well, there remained free from attacks, 338; 43 were not benefited; and in 74 the result was doubtful. He particularly notes that of the 90 who never had had any malarial fever, only nineteen per cent. were attacked in this unhealthy year, and those attacked only had slight fevers readily yielding to quinine. The treatment was begun with one lamel containing two milligrammes, about the one thirty-fifth of a grain, of arsenious acid daily. After four days, a second lamel was given, and so on, until four were taken each day. In a few cases, the dose was increased to seven lamels, about one-fifth of a grain, daily, and apparently with better results.

Philadelphia Diplomas in Australia.—The Rev. R. V. Danne, of Melbourne, stated that he desired to become a missionary, and attended a few lectures off and on at the Melbourne Medical School. He then sailed for America, and returned in nine months armed with a diploma from the Medico-Chirurgical College in Philadelphia. On the strength of this he sought registration as a regular physician, but was rejected. The diploma was said to have been a gem, and couched in the most wonderful Latin.

A Well-meant Endeavor to Relieve Suffering.—A Chicago correspondent of the *Atlanta Medical Register* relates the following incident: "A physician living on the South Side was recently called in to catheterize the bladder of a man said to be dying from kidney disease and suffering from retention. On his arrival he found the patient comatose, and in the care of two female physicians of the homœopathic persuasion, one of whom had been vainly endeavoring to reach the bladder with a female catheter, which she tendered him on his arrival, alleging as the cause of her failure that she was

not accustomed to catheterize the male bladder. Saying that he had an instrument of his own which he was used to, he drew off twenty-four fluid ounces, and retired with a firm conviction that this was one of those events which make one smile even in the presence of death."

A NEW FORM OF ASPIRATOR.—An aspirator has recently been devised by M. Creuzan, of Bordeaux, which is worked without piston or stop-cocks. It consists essentially of a large caoutchouc bulb, which, by means of a special arrangement of valves, may serve as an aspirator or an injector. A glass cylinder is attached to the bulb, so that the nature of the fluid may be readily determined. There is no possibility of air entering the cavity from which the fluid is to be removed, and the instrument possesses the further advantage that the operator requires no assistant, but can readily hold the trochar in position with one hand and the aspirator with the other. Any quantity of fluid may be removed by simply compressing the bulb without detaching the instrument from the needle.

AN ADVANCE IN OPHTHALMOLOGY.—In a recent case of vitriol-throwing in France the victim, M. de la Roche, suffered a total loss of eyesight. But a morning journal of Paris gravely states that the medical attendants have succeeded in replacing his burned organs by the eyes of a rabbit and that he now sees perfectly.

HOW TO KEEP THE HYPODERMIC SYRINGE IN ORDER.—Dr. W. B. M——, of Vedalia, La., advises the substitution of "green-packing," such as engineers use, for the old piston leather in the syringe. The instrument can then be neglected for some time and yet be ready for use. A "Subscriber," from Chicago, writes that by getting one of Fowler's hard-rubber syringes, with hard-rubber pistons, no trouble is ever experienced.

IODOFORM AND ERYSIPELAS.—Dr. C. G. Roehr, of Ledyard, Wis., writes in reference to a statement by Dr. Seely, of Cincinnati, that iodoform caused erysipelas, as follows: "I think some two years since I saw in some German journal that, owing to the great increase in erysipelas, iodoform had to be given up in surgical dressing. I have seen antiseptics, including iodoform, tried thoroughly, and have seen a number of the so-called cases of erysipelas, and found them to be simply cases of erythema or dermatitis venenata. By experimenting I have found that it can be cured by quitting the use of the iodoform. I have caused and cured it in this way a number of times on the same patient—and it occurs in possibly one per cent. of all surgical cases. This is what our professors call idiosyncrasy, and we have the same result in the use of arnica and a number of other drugs."

TREATMENT OF THE OPIUM HABIT.—Dr. A. W. Jackson, of Wurtsboro, N. Y., writes us that he has been quite successful in treating cases of the opium habit by applying the following measures: First, cheerful surroundings, and plain, wholesome, assimilable food. Second, unceasing watchfulness on the part of the friends and attendants of the patient. Before the treatment is commenced, the patient should be put in as good a condition, physically, as possible. In an old case, commence the treatment by cutting off two-thirds of his daily supply of morphine. If he had been taking twelve grains per day, prepare the following prescription:

℞. Morphiæ sulphatis..... grs. lvi.
Ext. belladonnæ solid ..... grs. xij.
Quiniæ sulphatis..... grs. xxxv.
Capsici pulv..... grs. iij.
Ft. in mass et in pilul. No. 42 div.
S.—One pill ter in die.

Also give about eight to twelve drops conc. tr. avenæ sativæ in a wineglass of warm water ter in die. Also a glass or two of old ale during the twenty-four hours. Milk punch can be given also, as the appetite will be found very difficult to manage. The supply of pills being calculated to last for two weeks, it becomes necessary to renew them at that interval. At each renewal cut off a given amount of the morphine until the pills contain only the belladonna, quinine, and capsicum. Continue with them for a month or less, and it will be found that they can then be dispensed with, and any good tonic substituted. The faradic current may be used also with advantage.

AMERICAN CATARRH.—Dr .Morell Mackenzie gives this name to a naso-pharyngeal catarrh which he found so prevalent in this country, that he calls it "a national complaint." He ascribes it to the universal prevalence of *dust*, in city and country. We do have plenty of dust everywhere, but less in winter than summer, while the "American catarrh" is far more frequent and obtrusive in the winter. Therefore, we fear that Dr. Mackenzie is too narrow in his etiological theory. The following is the doctor's somewhat highly colored description of the too atmospheric distribution of American soil: "Owing to the immense size of the country, and its sparse rural population, the country roads have not, as a rule, been properly made, and except in some of the older States, are merely the original prairie tracks. In the cities, notwithstanding the magnificence of the public buildings, the splendor of many of the private houses, and the beauty of the parks, the pavement is generally worse than it is in the most neglected cities of Europe; such indeed as are only to be found in Spain or Turkey. It must be recollected also that, whilst in the decayed towns of the Old World there is very little movement, in the American cities there is a ceaseless activity and an abundance of traffic. Hence the dust is set in motion in the one case, but not in the other. The character of the dust, of course, varies greatly according to the locality. In some parts, it is a fine sand; in others an alkaline powder; whilst in the cities it is made up of every conceivable abomination, among which, however, decomposing animal and vegetable matters are not the least irritating elements. An idea may, perhaps, be formed of the state of the atmosphere from a consideration of the fact that in many cities the functions of the scavenger are quite unknown."

THE TREATMENT OF CRAMP.—Surgeon Robert Manners Mann writes in the *British Medical Journal*: "There is no remedy I have found to answer, except the raising the head of the bed. I cause two bricks to be placed under each leg, or a block of wood of the same thickness as two bricks. Patients who have suffered at night, crying loudly with pain, have found the above plan an immediate, certain, and permanent relief."

BORACIC ACID.—Dr. Squibb writes of boracic or, more properly, according to the nomenclature of the late Pharmacopœia, *boric* acid, as follows: "If the powder be needed, as is generally the case, it should be specified in the prescription. The powder should be very fine, and should be white and light, and entirely free from particles when rubbed between the finger and thumb, feeling very like powdered soap. It is only such powder that answers well in eye surgery or general surgery for dressings, and solutions are also best made from it. A saturated solution contains about nineteen grains to the ounce, and from ten grains in the ounce to saturation it is used as an eye-wash or to granulating and suppurating surfaces. It is a very bland and soothing application, both in powder and solution, relieving irritation and arresting suppuration. It is a potent antiseptic, much less expensive than salicylic acid, and it is odorless and more easily managed than carbolic acid. It is probably better than either to preserve hypodermatic solutions. In surgical dressings it has the great advantage over carbolic acid of not being irritant nor poisonous. But not being volatile it does not deodorize the air."—*Ephemeris.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 14 NEW YORK, OCTOBER 6, 1883 Whole No. 674

Original Articles.

METHODS OF MEDICAL INSTRUCTION.

INTRODUCTORY ADDRESS DELIVERED TO THE STUDENTS OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK, OCTOBER 2, 1883.

BY HERMAN KNAPP, M.D.,

PROFESSOR OF OPHTHALMOLOGY; SURGEON OF THE N. Y. OPHTHALMIC AND AURAL INSTITUTE; LATE PROFESSOR AT THE UNIVERSITY OF HEIDELBERG.

GENTLEMEN: Which is the best method of medical instruction? Evidently that by which the student learns most. So long as students differ in aptitude to learn, owing to differences in mental capacity, attentiveness, energy, perseverance, preliminary attainments, and in bodily health and strength, fitting them for more or less prolonged labor—so long as such and other differences exist among the students, one and the same method cannot be the best for all. For the *student* it is of the greatest importance to select that school and follow that method which is best adapted to his individual qualification; whereas the *school* has to consider the character of the students who make up its classes. If there is more or less homogeneity among the students the course of instruction can be correspondingly uniform, but if there is great diversity the means and modes of instruction must be so numerous and varied as to furnish suitable opportunities for all.

Now, if there must be a mutual adaptation of student and college, the one will require of the other certain qualifications without which a working together for a given purpose is impossible. The student must possess a certain stock of general knowledge, and the college must command, first, a sufficient corps of well-qualified teachers, and secondly, a collection of auxiliary means and material of instruction, large and varied enough to meet the legitimate demands of every student. Among these means of instruction I will mention spacious rooms and abundant material for dissecting; an anatomical museum; chemical, physical, physiological, microscopical, pharmacological, and pathological laboratories; dispensaries; hospitals; autopsy rooms; and last, but not least, a large and well-appointed college building, which encloses a part of the mentioned institutions, and which is located at a convenient distance from the others, for instance, the hospitals, so as to make it the centre, the starting- and rallying-point—in short, the home of the student.

If we examine the manner in which medicine, at the present day, is taught in different countries we can distinguish two systems, which may be termed the European and the American.

It is quite remarkable that each system, with national subdivisions, bears the stamp of the political development of its country.

The European method is planned, regulated, supported, and controlled by the political government. The State allows nobody to enter upon the study of medicine unless he has had a collegiate education carried on under an official programme. When the student presents himself at the medical school for matriculation he must have his certificate of maturity in hand. Then he has to go through a systematic course of professional study for at least four years, after which he must pass a final examination before a State board, and receives his license from the State authorities. The degree of M.D. is an academic honor, which in some countries is obligatory, in others optional. The medical schools, with all their appurtenances, are State institutions. The professors are appointed and salaried by Government, and are held responsible for the efficient teaching of all the departments of medical science and art in which the candidates for the license of practice are examined. The different schools of one or several countries, for instance all the universities of the German Empire and of the German-speaking provinces of Austria, Russia, and Switzerland, are brought up to the same standard. The student is at liberty to begin and complete his curriculum at one school, or to change as often as he pleases, only not during the course of a term. He can select also at his option that State board before which he desires to pass his fractional or entire examination. His license entitles him to practise in any part of the country. Of late, international agreements permit licentiates of medicine of one country to practise in another, subject to the laws of that country.

The *American method* of medical instruction differs widely from the European. It is the child of the free institutions of the country, letting everybody make of himself what he can, restricting his ambition by no barriers, asking few or no preliminary questions. The American medical students come from different stages of society and culture, one from the plough, another from college. Some of our colleges are inferior, others equal, and others—for instance, Harvard and Yale—superior to the German "gymnasium." He presents himself at the medical school, saying: "I am willing to work, to work hard. Will you take me as I am?" The schools, with a few exceptions, answer cheerfully: "You are welcome."

The young man matriculates and receives a little card, the programme of lectures and clinics, which informs him that eight or nine hours of instruction are provided for him every day. He goes to work with a will. During the first weeks he attends all of them, but when the interest of novelty and the enthusiasm for a high cause are gradually toned down by the hard daily labor, he chops off a goodly number of branches from the luxuriant programme. Next year, and perhaps the year after, he comes again and fills in what before he had left out. After three years' study under the guidance of a regular physician and after the attendance of at least two regular courses of lectures at a recognized college, each course of no less than twenty weeks' duration, he has to pass an examination in seven branches: anatomy, physiology, chemistry, materia medica, obstetrics, surgery, and medicine, before the seven professors, constituting the regular faculty of the school. If he passes this examination to the satisfaction of said professors he receives from them the degree of M.D., which lawfully licenses him to practise all the departments, general and special, at any place in the United States. Most of the Canadian medical colleges, as far as I can learn from their announcement catalogues, are arranged on the same plan. This plan was in operation in England for a long time, until the "Medical Act" in 1858 abolished it. Since that time the English medical student is no longer apprenticed to a practitioner, but has to undergo a preliminary examination in the classics, mathematics, history, and French, has to be at the medical school four full years, and is finally examined and licensed by one of the boards authorized by government.

Let me now sum up the characteristic features of the two systems:

1. *The European.*—A liberal preliminary education; four years of professional study; examination and license by a board authorized by government.

2. *The American.*—Requirements of preliminary education very modest or waived altogether; a three years' tutelage under a practitioner; during that time the attendance of two regular courses, each no less than twenty weeks, at a recognized medical school; the one-class lecture system (*i.e.*, no graded instruction, but the second course a repetition of the first), a written examination in seven topics; approbation and license by the seven professors constituting, as a chartered private corporation, the regular faculty.

If I have presented the two systems correctly and am asked which is the higher, I unreservedly declare myself for the European, and doubt whether there is any one in this assembly who would differ from me; at least I am sure that I speak the mind of every one of the teachers at the University of the City of New York. But, gentlemen, we are not responsible for the existence of the American system, we have not made it; it is, as I said before, the child of the free institutions of this country. The European system is the higher, is the higher still, and toward it we are tending. Will it always be so? No, most positively no! If the American method of medical instruction is the outgrowth of the American political constitution, it must grow and develop with it. The American constitution is the highest that has ever been framed, so sublime that it will take centuries yet for the people to become worthy of it. By giving every man equal rights of opinion, speech, and action, it takes away all barriers of individual development from the lowest position to the highest. I am not digressing from my subject, for the scientific progress of a nation depends in a great measure on its political condition. The science of man, anatomy and physiology, is the highest of all the sciences, and its application to the art of healing puts on it a divine crown. England had a free constitution before any of the modern European nations. In the last century it brought forth men like Harvey, Jenner, Abernethy, Astley Cooper, John Hunter, Thomas Young, and many others, whose names are registered in the history of civilization as benefactors of mankind for all time to come. They began to collect facts, founded hospitals, museums, and libraries whose treasures are still today inexhaustible sources of information for the most erudite scientist as for the tyro. These men learned and taught what they knew in schools conducted exactly like our own.

Then came the emancipation of Gallic thought at the time of the great revolution in 1792, and the French became the leading nation in politics, taste, art, and science until 1870. When I began my medical studies, in 1851, the text-books recommended at the German universities were prevalently translations from the French, and every one of us who aimed at a higher than an average position in life thought it incumbent upon himself to study, after his examination, at least six months in France, which meant Paris. When, fifteen years later, I visited again the medical school of that magnificent city I found that the text-books in the hands of the French students were to a great extent translations from the German, while in Germany the translations from the French had almost disappeared. The great French physicians, Bichat, Laennec, Magendie, Louis, Dupuytren, Nélaton, and many others, had disappeared and had not been replaced by men of equal eminence. Schools and collections had been neglected. The glittering third empire, despotic and hypocritical, erected on the horrible crime of the 2d of December, 1851, had laid, it seemed, iron fetters on the minds of one of the most gifted nations that the earth has ever produced.

German thought imperceptibly took the ascendancy in directing the march of European culture. To what strength the despised and ridiculed German people had unostentatiously grown up was demonstrated by the crisis of 1870, when the gigantic but hollow balloon of French glory burst like a soap-bubble before the breath of the German army. The German successes, gentlemen, were not obtained by the chance of the moment—great events never are, they are the result of slow growth and long preparation. Shall I tell the younger members of my audience what was the origin of this astonishing rise of the German nation? It is expressed by a few words which King Frederick William III. of Prussia spoke in his inaugural address at the foundation of the university of Berlin in 1817: "We have," said the king mournfully, "been humiliated and depressed in every respect, our country is ransacked and impoverished, our population reduced to nine millions. We must try to gain what we have lost in material strength by the development of mental power." And as the university of Berlin—which to-day is, perhaps, the most active centre of scientific movement—was founded in a truly national spirit, so schools of all kinds and degrees sprang up throughout Germany by the hundreds and thousands. You all have heard the proverbial sentence which, in 1871, was echoed from one end of the globe to the other, that the Franco-Prussian war was decided by the German schoolmaster. Many of the men who have rendered the German medical school famous are still living. I therefore refrain from mentioning their names. Any one who has not been in Europe for ten years will be astonished at the immense progress observable in the medical departments of the German universities. The completeness and magnificence of the institutions surpass all expectation. Anatomy, physiology, chemistry, physics, the branches of natural history and pathology, the different departments of medicine, even the so-called specialties, have all their separate institutions, the smallest of which can compare in size with the average American college. On inquiring what was the cause of this recent rapid development, I learned that by the governments of the different States one-half of the money received from the French as war indemnity, had been used for military purposes, the other half for the universities. You see they are still true to the traditions of the old King of Prussia.

When will America come to take the lead in medical affairs? Will she ever? Gentlemen, I am convinced that so much as the European civilization is above the Asiatic, so much will the American outrank the European. The Asiatic castes hindered the development of individual talent, and the European society, with its odious distinctions of common people, gentry, nobility, and royalty, is only a faint photograph of its Asiatic prototype. An immense soldiery is used as much for the perpetuation of aristocratic prerogatives as for national defence. In our, my adopted, country each man can elevate himself as high as his physical and mental means will permit, no classes privileged by birth stand in his way, and, besides, he has elbow space enough to spread in every direction. If Europe has the advantage of an old culture, of museums, libraries, collections of art, and all kinds of scientific institutions, America gives her sons one advantage worth more than all the European treasures: *an unbounded opportunity*. To all of you, gentlemen, she offers a successful career.

Although I have unhesitatingly said before that the European system of medical education shows a higher standard than the American, I am sure that an American medical college is better suited to your requirements than a European. The European system is not all perfection; it has its disadvantages as well as the American, and it behooves me to point them out so far as I can.

The European system is stereotyped, and strangles many a mind of an original and initiative turn. The preparation of a European medical student requires thirteen years. From his sixth to his tenth year he is in the grammar school, from the tenth to the nineteenth year he is in the "gymnasium," where most of the time is

devoted to Latin and Greek. He would be much better prepared for the profession of medicine if he gave more time to modern languages, mathematics, natural history, chemistry, and physics. In the four years of professional study he has to proceed so systematically and attend so many lectures, that often enough his patience is worn out by the theoretical exposition of a subject before any allusion is made to its practical importance. It wearies him; he becomes inattentive and plays truant. Let me illustrate this by an example. Zoology is one of the obligatory studies in Germany. A friend told me that when he was at Würzburg, the lecture on zoology was from one to two o'clock every day, immediately after dinner. One hot summer day, while the professor was lecturing on whales, he fought a desperate but unsuccessful struggle with Morpheus. The professor's words grew faint and fainter, like distant bells, till at last he fell asleep and only awoke when the bell was rung just in the midst of the professor's closing sentence, of which he caught only the last part, viz., "and therefore the whalers always place themselves on the left side of the animal." You do not know, said my friend, how much annoyance that nap has given me. I could not ask the professor, and since that time I have asked hundreds of people why it was that the whalers always try to get on the left side of the whale, but up to this day I have not yet received a satisfactory answer. Whether this story was original with my friend or not, I do not know; but it suggests the first advice, gentlemen, which I venture to give you: Do not sleep during a lecture.

If I were still young, I would read a little less Greek and try to get over my zoology before I entered a medical college. You must not think, however, that I consider the study of the classics, Greek in particular, as useless or superfluous. I do not think that a liberal education is complete without Latin and Greek. Apart from the intrinsic beauty and educational importance of the classics as a means of training the mind, Greek and Latin words form so large a part of our scientific vocabulary, and Latin is still daily so much used in prescriptions and medical literature that no physician can get along without them. But I protest against the inordinate time devoted to them in the European and also in the American colleges. That that time could be employed on more important subjects, is tersely expressed by these words of a German satirist: "If the Romans had been obliged to learn Latin as we are, they would never have found the time to conquer the world." It is said of the Germans that they think their time unlimited, and waste it in preliminaries. A German author, for instance, who wants to describe the history of a city, begins with the creation of the world. Permit me to recall to your mind that Washington Irving has done the same thing regarding this glorious metropolis, and that the American academic colleges are not a whit better than the German. Take Harvard as an example. The average age at which a boy enters the academic department is eighteen or nineteen years, and his brain must be pretty well stocked with Latin and Greek to make the entrance possible. To acquire the college degree costs four years more, during which his mind is fed again chiefly with Latin and Greek. After this college education he proudly enters the medical department, where he has to spend another four years. Then he would like to travel and see how they cure people on the other side of the Atlantic. All this, if his health be not broken, may make him a model student, but he will be a pretty old boy before he earns the first dollar, and circumstances may make it highly desirable for him to earn a dollar or two, or three, before he gets very old.

As to *preliminary knowledge*, it matters little where and when it is acquired. I consider it necessary, gentlemen, to know Latin grammar enough to write simple sentences correctly, and to read easy prose—for instance, Cæsar—without much preparation; to know Greek enough to be acquainted with the general spirit of the language, with the laws of the formation and derivation of words. It is horrible to read in print of *prodromata glaucomæ*, of the *fenestrum ovalis*, and the like. In mathematics the principles of algebra, plain and solid geometry, and trigonometry with logarithms, are indispensable. In natural history, chemistry, and physics only the rudiments are needed, for these sciences, so far as they have a practical bearing on medicine, will be thoroughly taught in the medical colleges—at least they are in this one. I regard it as self-evident that every medical student must be fully conversant with the English language; and it would be very useful if he could read German and French without effort. Those of you who have not had the good fortune to learn these preliminaries in younger years I advise most earnestly to do so later, and to devote a certain time to it every day.

How to arrange your professional studies to the best advantage. Here comes in the question of the superiority of a graded course over the one-class lecture system. To advance from the simple to the complicated, from the lower forms to the higher, is decidedly a good educational principle, and for the exact sciences, mathematics for instance, no other method could be advocated. But in sciences such as medicine, in which a vast, I may say the greater amount of knowledge has to be acquired, not by reasoning, but by experience, it is a positive advantage to lead the student from the first day straight to the field of observation. There at once his attention is engaged, his interest awakened, his sympathy with human suffering incited, and the desire to help becomes a passion. Correct diagnosis is fascination, healing the purest happiness. Thus from the very beginning the student will become enthusiastic in his profession; and enthusiasm is the mightiest stimulus to work. It is objected that a young student cannot fully understand a clinical demonstration. This is true, but he will be able to understand some, and if the teacher be good, even a good deal of it, so that the student may, in one clinical hour, gather more useful information than from a text-book in ten hours. Are text-books, are lectures unnecessary? By no means. Text-books have to be studied faithfully, and with patience and leisure, because they are the complete and well-arranged repositories of our stock of knowledge, of which the richest and best conducted clinic can impart only fragments. Lectures, gentlemen, are the easiest and most impressive way to acquire the greatest amount of information in the shortest time. An harmonious combination of all the means of instruction is the best manner of learning. The clinic will show you the object of your studies; it puts the questions which you have to solve, and is the mightiest incentive to scientific work. The sick-room will drive you to the lecture-room and to the laboratories, the chemical, physical, physiological, and pathological workshops where you have to try your hands on lifeless objects until you have acquired sufficient skill to manage the ailments of living human beings. The operating theatre demonstrates the importance of the dissecting-room and of the collection of instruments and apparatus. The disorders of the nervous, visual, and acoustic organs will urge you to visit the cabinets of electricity, optics, and acoustics.

Use them all, gentlemen, all the means of information. Do not pass the whole day in the lecture-room and the evening in "quiz" classes, as by so doing you may at the end of your studies be able to pass a brilliant examination in writing, but unable to distinguish intoxication from apoplexy, scarlet fever from nettle-rash, a gathering in the ear from meningitis. On the other hand, do not lounge the whole day in dispensaries and hospitals, observing symptoms and witnessing operations. This plan is too apt to lead to unreasonable empiricism, whose votaries are satisfied when they have filled their note-books with prescription formulas of cough-mixtures, anodynes, nerve-tonics, alteratives, hypnotics, cosmetics, antipyretics, and purges. While at the college, employ the chief part of your time to learn how to diagnosticate.

Almost everything else you can learn at home. To become a good diagnostician, which is the next thing to being a good physician, requires a teacher and abundant and well-selected clinical material, which you cannot expect to find in the first years of your practice. Weakness in diagnosis does more harm than all other shortcomings together. Without a correct diagnosis, a trustworthy prognosis and a judicious management of a case are impossible. Gentlemen, the diagnosis and the prognosis, not the treatment, make the physician, in the eyes of the public. I emphatically repeat these well-known truths, warning you not to neglect the scientific foundation of the art of healing while collecting a set of recipes, nine-tenths of which are useless. Do not fight symptoms with drugs before you have carefully searched for the cause of the symptoms. The poorest pathologist always prides himself on his therapeutical greatness. There is, in every science, a mythological part which is handed down from generation to generation, whose disbelievers formerly were crucified, now are ostracized. Shall I tell you where the mythology of medicine is stored up? In the handbooks of materia medica, allopathic as well as homœopathic. But do not think me a nihilist. If I believe that nine-tenths of what is said of the virtue of drugs is myth, I am convinced that the last tenth is a blessing to mankind.

I have ventured to give you only some general advice how to study, leaving the special arrangements to the teachers of the different subjects.

I come to the last part of my address: *What opportunities for your studies does this college offer you?* It offers all you can desire, and more than any one of you can make use of. Chemistry and physics are well taught, and I am happy to say, that Professor Draper lays more stress on physics than is commonly done. Its importance is at least equal to, in my opinion greater than, that of chemistry. In anatomy, not to speak of the teaching, the material and facilities for practical work are unsurpassed. All the other branches receive due attention. The large general hospitals, Bellevue and Charity, in which the clinics are held, are before our door, and contain eighteen hundred beds, which are always occupied.

Other hospitals of a more special character are near at hand and equally at your service for clinical instruction. The dead houses of Bellevue and Charity hospitals furnish abundant and freely available material in that most important of all the auxiliary departments of medicine, pathological anatomy. The different laboratories contained in the new wing of the college building, inaugurated last year, have proved a great success, and invite your attendance and appreciation. You receive there gratuitously private instruction for which in Europe you would have to pay high prices, as the assistants of the European schools make their living more or less from such courses. Every branch of medical study, theoretical and practical, is taught in this college. What else can you desire? The opportunity is given, it is for you to avail yourselves of it. You are at liberty to map out your own path of instruction, to gather much information or little. The freedom of learning is as fully granted here as at any German university. You are considered as men ripe enough to judge for yourselves, and select what is best for every one of you. The college-bred scholar has only to look over the catalogue to lay out for himself a systematic graded course of three or four years' duration. The German student does the same. The scientifically less prepared, but mentally no less strong student, may choose the practical method, gather all the information which the clinics and lectures afford, and fill in what he lacks in theoretical knowledge during the evening and the vacation. Though, perhaps, he will not greatly advance the science of medicine, he can doubtless become a competent physician and a successful practitioner. The European universities do the same as our schools. They exclude nobody from availing himself of all the resources they possess. They matriculate and promote everybody without distinction, and at the same rates, which is honest enough. It is not the medical departments of the European universities that demand a certificate of maturity; it is the State that refuses admission to the final examination by which the license to practise is granted if the candidate cannot produce a college certificate of maturity and evidence of four years' professional study at one or several universities. Whether in this country, sooner or later, the State will or will not take the final examination of the physician in hand is not for me to guess at. Thus far the licensing power is granted to the medical schools, and the time will soon come when you will have to present yourselves ready to answer questions in the seven topics.

Seven topics! Are there only seven topics in the vast domain of medical science? If you say there are seven chief branches, the remainder are "specialties" of which the candidate need know nothing, you are mistaken. There are no specialties; the human body is an harmonious whole, nothing can be left out or set aside as serving a special, extraneous purpose, not even a tooth. The scheme of examination by speaking of seven branches, means that the whole of medicine is classified in seven larger divisions, each of which will have to be subdivided, but none of the subdivisions must be ignored. The faculty desire it to be understood that all the subjects that are on the programme are worth knowing and of importance. They desire it to be understood that all branches of medicine—may they be taught by the regular professors or may they, for the sake of convenience and efficiency of instruction, be placed in the hands of special teachers—will be examined into according to their respective dignity. Some of these so-called specialties have acquired an extent of theoretical and practical significance, not inferior to some of the seven branches. I will mention, for example, ophthalmology, which is commonly regarded as a part of surgery, but which has acquired such an importance in internal medicine that Nothnagel, professor of theory and practice at Vienna, said last year that no medical man should be licensed who could not handle the ophthalmoscope. It will not do, gentlemen, to march so directly toward the programme for your M.D. that you leave unnoticed vast domains of the science and art of medicine, because you think they will not be subjects of examination. The specialties will come under the head of one or other of the seven branches and be examined by the official teacher of that branch, the questions to be formulated either by the professor or by the special teacher. In ophthalmology, for instance, two questions will in future be regularly given to each candidate for M.D., the one by the professor of internal medicine, the other by the professor of surgery. Skin diseases, nervous and mental diseases, ear diseases, throat diseases, etc., are all most important parts of medicine. Patients affected with them will demand your services daily. By requiring sufficient knowledge in these branches, and providing you with the means of obtaining it, the faculty does you a favor and a service, for which you will bless it all your life.

Let me now say a word about *post-graduate instruction.* Those who want to go beyond the requirements for their diploma will find ample opportunity to do so in this college, and in the different hospitals and other institutions of this city and this country. He, however, who feels the sacred fire in him will not be afraid to cross the ocean in order to perfect himself in Europe. Let full liberty prevail in all this, let every one choose and act for himself, and let it be recognized that we must and shall have physicians in this country to whom the management of the most important diseases may be entrusted with the same confidence as to the first European authorities. This city certainly will not lack such physicians, according to the stubborn law which governs the relation between labor and reward. This law throws the best men where work is best rewarded.

Ten years ago I was consulted by a Boston physician for a serious ophthalmic difficulty. I advised him to stay in New York and have his eyes treated. He asked me, quite astonished: "Why, haven't we as good physicians in Boston as you have in New York?" I replied without feigned modesty: "No, sir, and you never will have; for talent, like merchandise, has a tendency to seek the best market." He understood, stayed, had his eyes cured, and soon afterward settled in New York himself.

Gentlemen, as civilization advances with the progress of science, the requirements of a candidate will be greater from year to year. The faculty of this college have the earnest desire, and make every effort in their power to advance the standard of proficiency of the students. Last year they added the laboratories and section teaching, this year they have founded the *College Dispensary*, in which the students have an opportunity to make themselves acquainted with the milder and more common forms of disease, for which people are not admitted to hospitals.

You see, gentlemen, there is every opportunity afforded for a thorough medical education. What method you pursue is indifferent, only follow it up. In learning languages there are also two methods: 1, the *systematic*, which begins with the declension of nouns and goes regularly through all the chapters of grammar, etymology, and syntax, before the pupil reads the simplest book; and 2, the *practical* method, which begins with sentences, from the start, and deduces the rules of grammar from examples in speaking and reading. This method has appropriately been called the *natural*, for it is the way in which the child learns its own language. Who can say which of the two methods is the better? The systematic is more adapted to the scholar, the natural preferable for the requirements of practical life. In both methods, however, a given amount of work has to be done. There are in the English language, for instance, thirty-six thousand words which have to be committed to memory in some way or other. This requires time and work. The same in medicine. Its large stock of knowledge can be acquired only by hard and persistent labor. If any one of you thinks himself capable of getting a sufficient knowledge of the essential parts of the theories and practice of medicine during two college courses of twenty weeks each, he is fundamentally mistaken. I advise every one of you, in the name of the faculty, so to arrange your curriculum as to attend three full terms at the college, a winter and a summer course making one term. The old philosophers held it to be the highest maxim, "Know thyself;" Carlisle says, in modern times the maxim should be, "Know thy work and do it." Both are good maxims. Gauge your own faculties, examine the task before you, plan your work carefully, begin without delay, and do not stop till you have reached the end.

This, gentlemen, reminds me that it is time for me to stop, and for you to begin.

THE SECRET OF LONGEVITY.—A French medical man, who has just died at the age of one hundred and seven, pledged his word to reveal the secret of his longevity, when no more, for the benefit of others. It was stipulated, however, that the precious envelope containing the recipe for long life was not to be opened until he had been buried. The doctor's prescription, now made known, is simple enough and easy to follow, but whether it is as valuable as he pretends is extremely doubtful. He tells his fellow-men that if they wish to live for a century or more, they have but to pay attention to the position of their beds. "Let the head of the bed be placed to the north, the foot to the south, and the electric current, which is stronger during the night in the direction of the north, will work wonders on their constitutions, insure them healthful rest, strengthen their nervous system, and prolong their days." It is, he adds, to scrupulous attention to the position of his bed that he ascribes his longevity, the enjoyment of perfect health, and the absence of infirmity.

REPORT OF A CASE OF ACUTE FATTY ATROPHY OF THE LIVER, WITH POST-MORTEM EXAMINATION.

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THE following case is reported as a typical instance of a malady of not very frequent occurrence, in which the diagnosis, though attended with some difficulty, was made during life, and completely verified by a post-mortem examination.

J. G——, a most faithful and exemplary member of the medical profession, was engaged in his usual duties until Sunday, July 15, 1883, when he suffered from a severe attack of gravel, the calculus passing apparently along the left ureter.

To relieve the pain he inhaled in the course of Sunday morning about three ounces of chloroform without much benefit, the suffering returning as soon as the influence of the anæsthetic passed away. In the afternoon his friend and medical attendant, Dr. W. F. A. Kemp, was summoned to see him, and immediately administered a hypodermic injection of morphia, with the effect of at once relieving his pain and giving him sleep.

On the following day he was free from pain and attended to his professional duties, as he did throughout the week and until Wednesday, July 25th, though he spoke of feeling badly, and to those who saw him he appeared far from well.

On Thursday, the 26th, he went out in the morning, but came home with a severe chill, which was followed by fever, in which the temperature rose to 103.5°. Persistent nausea and vomiting occurred, with pain in the back, chest, and limbs, and oppression of breathing. The symptoms being like those of remittent fever, his physician prescribed for him the sulphate of quinia together with the salicylate of cinchonidia, under which the temperature fell to 99°, but in other respects his condition remained nearly the same for the two following days.

On Saturday, the 28th, the pain in the chest and oppression of breathing suggested the possible existence of a central pneumonia, as yet not extending to the surface so as to be detected by the ear; and under these circumstances I was kindly invited by Dr. Kemp to see the case with him. The nausea and vomiting were still continuing, the ejected matter consisting chiefly of mucus and watery fluid without any discolorations; temperature 103°. There was a slight icterode hue of the skin and conjunctiva. The patient, though evidently suffering from pain and oppression in the chest, was calm and uncomplaining. A very careful auscultatory examination made by both Dr. Kemp and myself showed no sign of pneumonia. The symptoms still appearing like those of malarial fever of a remittent type, it was decided to continue the use of quinia in somewhat larger doses. On the following day, Sunday, the 29th, the nausea and vomiting had diminished, and the temperature was 98.5°.

On Monday, the 30th, the patient expressed himself as feeling better, and read the newspaper in the morning, but occasionally some wandering of mind was observed; and in the evening the jaundice was more marked.

Tuesday, 31st.—In the morning some degree of somnolency was apparent; the jaundice was still deeper, and the temperature had fallen to 97.5°. Percussion over the liver appeared to show some lessening of the area of hepatic dulness, but as the abdomen was very large and fat it was impossible to pronounce positively from this method of investigation as to whether the liver was diminished in size or not. At 5 P.M. it was found difficult to arouse the patient, and at 8 P.M. the stupor was still deeper. This condition continued all night.

Wednesday, August 1st.—At 11 A.M. the patient was profoundly comatose, and it was impossible to arouse him. The bladder had been evacuated involuntarily, and some blood had been passed from the urethra, not diffused through the urine apparently, but staining the sheet in spots. On passing a soft catheter into the bladder, urine to the amount of about two ounces was obtained, which was healthy in appearance, contained no blood, was of normal specific gravity, and showed no albumen when tested with heat and nitric acid.

The diagnosis of the case appeared now to lie between four affections: first, pernicious remittent fever; second, yellow fever; third, uræmic coma; fourth, acute fatty atrophy of the liver.

The first of these diseases was excluded by the consideration that quinia had been freely given, and that under its use perfect apyrexia had occurred.

The occurrence of yellow fever in a single sporadic case was impossible in the highest degree, as no instance of the disease has been known in Baltimore this year, and the summer has been remarkably cool, and not of that continuously elevated temperature which seems necessary for the development of yellow fever.

The suspicion of a renal origin of the symptoms, suggested by the coma and the constant recurrence of nausea and vomiting, was negatived by the result of the examination of the urine.

There remained, then, the fourth alternative—acute fatty atrophy of the liver; and after fully weighing all the facts in the case, the opinion was formed that this would be found to be the organic disease upon which the symptoms of the case depended.

The patient died comatose about 6 P.M. August 1st.

On the afternoon of the following day a necropsy was made by Dr. J. E. Michael, Professor of Anatomy in the University of Maryland. The lungs were found to be hypostatically congested, especially in the lower and posterior parts, but no pneumonic change was present. The heart was soft and largely overlaid with fat; its valves and orifices were healthy.

The abdominal parietes contained a very large amount of fat, as did also the omentum.

The stomach contained a good deal of dark fluid, evidently consisting in great part of altered blood, and resembling the black vomit of yellow fever.

The kidneys were dark in color, somewhat mottled, and surrounded with an unusually large quantity of fat; but they were not organically altered.

The liver occupied not more than one-half of the space which it would be expected to fill in the abdomen of a man as large as was the subject of the examination. When removed from the body, it weighed exactly 31½ ounces, or about one-half of its normal weight, which, in such a subject, should have been about sixty ounces.

In the only case of acute hepatic atrophy reported by Dr. Murchison, in his work on "Diseases of the Liver," that of a young girl aged nineteen, the organ is said to have been "extremely small, weighing only 28 ounces, or exactly one-half of the standard weight for the girl's age."

In a case recorded by Professor Flint., Sr., which was also one of a young female, aged twenty-one, the liver was reported to be much reduced in volume, weighing 29 ounces.

Now, if these weights, 28 and 29 ounces, indicate a very remarkable reduction in the size of the liver in young females, as they certainly do, the weight of 31½ ounces, as met with in the liver of a large man, would show proportionately fully as great a diminution of its normal bulk.

This alteration of the size of the liver excluded entirely the diagnosis both of remittent and of yellow fever, for in both of these diseases the liver is either larger, or, at any rate, not smaller than natural; while it is generally of a bronze hue in the former disease, and of a straw-color in the latter.

In consistence the organ was very soft and friable, and it presented the appearance of being much congested, being dark in color, but not of the deep ochre or rhubarb hue described by some observers. A portion of it was examined with the microscope by Dr. J. E. Atkinson, Professor of Pathology in the University of Maryland, and was found to have lost almost every trace of normal liver structure.

A certain amount of connective-tissue was present, but no hepatic cells were discoverable, and in their place large quantities of oil-globules and granular matter were found.

The small amount of urine obtained before death was alkaline in reaction and contained some bile-pigment; crystals of triple phosphate were visible under the microscope, together with a few hyaline casts. An examination for leucine and tyrosine gave negative results, but the absence of these products did not affect the diagnosis, for, as is remarked by Dr. Murchison, "the detection of these crystalline bodies in the urine of a case of jaundice may be said to clinch the diagnosis of acute atrophy of the liver, but the failure to detect them must not exclude acute atrophy from the diagnosis."

The verification by the post-mortem examination of this case of the diagnosis of acute fatty atrophy of the liver was complete. The case was *acute*, for until seventeen days before his death the patient was attending to his usual duties, not suspecting the existence of disease. The change in the liver was *fatty*, as shown by the destruction of its normal tissue and the presence of a very large quantity of oil-globules. The change was *atrophic* in character, as the organ was of only about one half of its normal weight.

Two circumstances, the sex and age of the patient, rendered this case one of especial interest. The disease is much more common in females than in males; of 31 cases collected by Frerichs, 22 were females. The age of the subject of this report was about sixty, whereas a large portion of those attacked with the disease are under middle age. Of Frerichs' 31 cases 26 were under thirty, and all except two under forty.

Little or nothing is known of the originating causes of acute atrophy of the liver, nor of the primary changes in the nutrition of the organ which lead to an acute fatty degeneration. The malignant jaundice of the older writers was believed to be sometimes superinduced by mental emotions of a depressing kind, the *pathemata mentis* of Cullen, especially fear and grief. Sometimes, according to Sir Thomas Watson, it has been produced by great bodily suffering, or by a severe surgical operation, or perhaps by the dread which attended it. When resulting from nervous influences, it is observable, he remarks, that the cases "are often fatal, with head symptoms, convulsions, delirium, or coma supervening upon the jaundice." It is highly probable that in such cases the structural disease upon which the symptoms depended was that which later observations have shown to be acute fatty atrophy of the liver; and it is conceivable that in the case here reported the severe pain attending the passage of the renal calculus may have first started the morbid action by which the nutrition of the liver was fatally deranged.

OVARIOTOMY IN A CHILD EIGHT YEARS OLD.—Dr. Duchamp recently performed ovariotomy in a child eight and one-half years of age. The cyst was tapped and about a quart of lemon-colored fluid extracted. Then the tumor with the left ovary and Fallopian tube was removed. The operation was easily performed, and the child made a good recovery. The author recalls other cases in which the operation has been performed on young girls, and in which the favorable issue has shown the wisdom of operating thus early, and of not waiting until the tumor has grown to such a size as to endanger the life of the child.—*Journal de Méd. et de Chir. Prat.*, September, 1883.

A CASE OF EPITHELIOMA ORIGINATING IN ABSCESS OF THE LACHRYMAL SAC.

FROM THE PRACTICE OF DR. C. R. AGNEW AND DR. D. WEBSTER.

BY DAVID WEBSTER, M.D.,
PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC.

MR. K——, a Connecticut farmer, had lachrymal abscess at the age of forty-five, and was always afterward troubled with stillicidium, or a "watery eye." He consulted an eminent ophthalmic surgeon in 1872, thirteen years after the occurrence of his attack of acute dacryocystitis, and was advised to have an operation performed for opening his tear-passage, but neglected to attend to it. So the disease was without treatment until January 14, 1875, when Mr. K—— came to New York and put himself under our care. He was then sixty-one years of age, and the lachrymal disease had existed for fifteen or sixteen years. There was a tumor of the size of a Lima bean over the tear-sac, and on its surface was an ulcer covered with a scab. Pus could be squeezed from the lachrymal sac. The eyeball was red, and there was some superficial vascular keratitis. There was no pain in or about the tumor, but "a little trifling itching." The vision of the eye was $\frac{15}{16}$.

We made a diagnosis of probable epithelioma, and Dr. Agnew removed the growth with a knife and placed it in the hands of Dr. Elijah A. Maxwell for microscopic examination.

Dr. Maxwell reported as follows:

"January 26, 1875.—I have examined microscopically the specimen, and herewith append what has been disclosed. The growth has a connective-tissue stroma made up of moderately large, spindle-shaped, nucleated cells; next, an infiltration of numerous round cells, resembling granulation tissue in form and arrangement of cells, and found most numerously in the central portions of the tumor, while the main bulk of the growth is made up of distinctly epithelial elements, showing the following varieties of cells. They were ovoid, polygonal, conoid, at the borders serrated, all with a large nucleus almost filling the cell and containing numerous nucleoli. Patches were found at the borders presenting the same appearances as the endothelium of lymph spaces, and giving one the impression of the probability of growth in this direction. It is, in my opinion, *an epithelial carcinoma* of the small-celled variety."

February 22, 1875.—The wound made by the removal of the tumor has entirely healed. There is still pus in the lachrymal sac.

Dr. Agnew now slit up the lower canaliculus and passed a narrow, probe-pointed knife down through the nasal duct to the nose. The passage was kept open by probing for a time and then the patient was allowed to return home.

October 21, 1876.—In about two weeks after the patient ceased to visit us two little nodules appeared in the same position from which the original tumor had been removed. They are now of the size of a small split pea each. The eye is the seat of chronic conjunctivitis and a glairy-looking pannus, as though there might ultimately be epithelial trouble of the cornea. The palpebral conjunctiva of the upper eyelid also looks threatening.

Mr. K—— was advised to have the two recurring growths removed, but declined to have them interfered with at that time.

We did not hear from him again until September, 1883, when his nephew called at our office and completed his history. He stated that after the patient called upon us for the last time the growth increased rather rapidly, and became painful, always worse on taking cold. After about two years it had grown to a considerable size, and he placed himself under the care of a cancer doctor who put on a cancer plaster and "drew it out by the roots." The operation extended through some weeks and was very painful, but the tumor was effectually destroyed, the site healed leaving a deep depression, and the growth never returned.

The patient died of typhoid pneumonia in March, 1881, after an illness of only eight days. It was his third attack of pneumonia, the first having occurred about fifteen years before his death, and the second within a few years of the first. There was no family history of cancer.

266 MADISON AVENUE.

THE DIAGNOSIS AND HYGIENE OF TYPHOID FEVER.

BY E. HOCHHEIMER, M.D.,
ASSISTANT SANITARY INSPECTOR NEW YORK HEALTH DEPARTMENT.

HAVING been assigned by the Board of Health to the investigation of the sanitary conditions attending or causing typhoid fever, several circumstances regarding its etiology and diagnosis have forced themselves upon my notice, to which, as they differ somewhat from generally received opinion, it appears advisable to call the attention of the profession, especially at the present time, when the disease is encountered with such unusual frequency.

Judging from the clinical picture of typhoid fever as usually given in the text-books, its diagnosis would seem an easy matter. The malaise which precedes its advent, the chill which marks its onset, the headache, epistaxis, diarrhœa, abdominal tenderness, ileo-cæcal gurgling, roseola, tympanites, enlargement of the spleen, cough, appearance of the tongue, and, above all, the peculiar, regular remissions and exacerbations of the fever, make up a group of symptoms which stamp the features of a disease easily recognizable and not to be mistaken. Whatever may be the cause, whether the above description is a mere generalization, or whether there is something about the climate and hygienic condition of this city which materially modifies the appearance of the symptoms, I shall not stop to speculate. The fact, however, remains, that in the great majority of cases as at present met with, the task of arriving at a positive opinion is by no means an easy one. As a rule, this is not accomplished until the second or even the third week; and it is not magnifying the difficulty of making a diagnosis to assert that, in most instances, there is none of the exanthematous or zymotic diseases which it is so hard to recognize early. And yet this early recognition of the disease is of the highest importance, for many reasons: it will aid the attending physician to discover the conditions producing or assisting to cause the disease, lead to the use of proper precautions to prevent its spread, direct the correct line of treatment, and enable him, in uncomplicated cases, to foretell its natural course and duration, and thus keep the friends and relatives from expecting impossibilities, and dooming themselves to inevitable disappointment.

The disease ordinarily begins in a manner resembling an attack of malarial fever. The patient complains of weariness and inaptitude for exertion, and there is generally more or less elevation of temperature. There may be a chill, but this is the exception and not the rule; the same is true of the epistaxis. The condition of the intestinal action is variable: in many, diarrhœa is present, while in probably an equal number the movements are natural or the patient is even constipated. The appearance of the tongue is equally uncertain: sometimes it is coated, sometimes dry, sometimes almost normal. The coating, when present, may be white, yellow, or brown, and situated at the base, at the sides, at the tip, or in the centre; in short, it shows nothing more than is to be seen in any fever or inflammation. Abdominal tenderness is a more constant symptom, but not by any means met with in every case; in some instances it is probably present, but the patient's mental hebetude prevents its being appreciated. The cerebral symptoms are very irregular: while many subjects complain of

headache, or a sense of fulness across the forehead, others do not deviate in this respect from their usual condition. The "characteristic temperature curve" of the first week will seldom be observed.

The above hasty glance at the more common manifestations of the disease in question would apparently leave us in a very uncertain state of mind, in the first few days of the sickness, as to the nature of the patient's complaint. This is undoubtedly true, except where there has been another case of typhoid fever in the house shortly before, the diagnosis must be mainly made by exclusion. But the darkness is not so profound as it may, at first sight, appear. In the first place, there is the fever, more or less continuous; secondly, in addition, there are generally one or more of the other symptoms, and in this disease, to borrow a phrase from homœopathy, it is especially necessary to have in view "the totality of the symptoms;" thirdly, any case of "malarial fever" which persists longer than three days in spite of sufficient administration of quinine should excite suspicion of typhoid; and lastly, there is a symptom which is peculiar and so constant that it may almost be regarded as pathognomonic, *the roseola.*

The time at which these spots appear varies; they may be met with as early as the third day or not until the end of the first week. Nor are they always, strictly speaking, on the abdomen; they occur sometimes on the pubes, or, perhaps most commonly, over the lower ribs. Neither are they always confined to the trunk; in exceptional cases they invade the extremities as well, and this without any apparent relation to the severity of the attack. In size they are from the one-thirty-second to the one-sixteenth of an inch in diameter, depending upon the character of the skin, being smaller in young subjects and in those who have delicate skins. The same remark applies to their elevation above the surrounding integument; they may be not at all raised, or elevated almost to papules. They are smooth, and, when they are most palpable, in running the finger over them but a slight resistance is encountered. In color they are bright red, and they *disappear completely on pressure*, showing again quite promptly when the pressure is removed, the rapidity of their reappearance depending of course on the activity of the circulation. In number they vary within wide limits; there may be only one spot in the course of the disease, or, as stated above, there may be an eruption covering the greater part of the body and coming out in successive crops. But whether they be few or many, their presence is almost constant, and, if carefully looked for, particularly during the second week, they will be found in probably no less than ninety to ninety-five per cent. of all cases. In short, they are so peculiar and characteristic that they cannot fail to be of the highest diagnostic value.

The bronchitis, which generally shows itself at the end of the first week, is likewise one of the most constant symptoms; and while, of course, it may be accidental, taken in connection with the other symptoms it may assist in arriving at a conclusion in doubtful cases.

As to the sanitary conditions under which typhoid fever occurs, a few words must suffice. While it cannot be denied that in many, perhaps the majority of cases, no particular defect can be discovered, still in a very large number obvious cause can be found. Prominent among these may be mentioned untrapped or unventilated waste-pipes, leaky discharge-tubes, sewers, or soil-pipes, lack of water in the water-closets or school-sinks, and foul-smelling, badly cared-for privy-vaults. Where more than one case has occurred in a house, one or more of the above conditions will rarely be absent.

It would appear almost an impertinence on my part to say anything with reference to the precautions necessary to prevent the spread of the disease, and yet so frequently do both my colleagues and myself see them neglected, that it may not be out of place to call particular attention to them. It is apparently well established that the materies morbi lies in the discharges from the bowels, and only becomes active after they have undergone a certain amount of decomposition or fermentation. The process of prevention is therefore simple and direct; all that is required is to thoroughly and speedily disinfect the stools or anything that has been soiled with them. Copperas is very good for this purpose, and has the advantage of being cheap and odorless. A solution of this should always be kept in the chamber or bed-pan, and when the patient has a movement of the bowels the vessel should be emptied at once and well rinsed and have some of the disinfectant again put into it. If the patient's linen or bed-clothes should accidentally be soiled, they should be changed at once and disinfected; for this purpose hot water is excellent, and the solution of chlorinated soda, known in the laundry under the name of Javelle water, is to be commended. The patient's undergarments, etc., should not be washed with the clothing of other members of the household. It is hardly necessary to add that to sprinkle carbolic acid or to strew chloride of lime about the sick-chamber is, to say the least, of doubtful utility. The practice of keeping the discharges for the doctor's inspection is a source of danger, and, except in rare instances, it should not be countenanced. These measures cannot be begun too early; the attending physician should not be content with giving general directions, but should lay down strict and minute instructions for disinfection, and by daily inquiry see to it that they are complied with.

207 East Fifty-Seventh Street.

POISONING BY SULPHATE OF ATROPIA.

Successfully Treated with Hypodermics of Sulphate of Morphia.

By LLEWELLYN ELIOT, M.D.,

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Cases of poisoning by atropia are becoming of frequent occurrence, more especially since the appreciation and application of its therapeutical effects increases. Ophthalmic troubles, rheumatism, pertussis, dysentery, the sweating of phthisis, poisoning by opium yield to its proper administration as if by charm. The dose for internal administration has been stated to range from .0005 gm. to .003 gm. ($\frac{1}{12\frac{1}{8}}$ gr. to $\frac{1}{20}$ gr.). Like many other valuable remedies it is often abused. The following case was seen, in conjunction with Drs. J. I. Dyer and J. S. Harrison, during my service as Resident Physician to the Washington Asylum Hospital of this city.

Mary H——, white, aged forty years, born in Ireland, was admitted to hospital on December 11, 1881, for treatment for "double iritis" of short standing. She gave a history of frequent exposure and attacks of alcoholism and rheumatism, but nothing pointing to syphilitic taint. She was directed to use a solution of atropia sulphate, .133 gm. to 32 c.c. (gr ij. to ℥ j.), applied night and morning; the strength of this solution was on December 16th increased to .266 gm. to 32 c.c. (gr. iv. to ℥ j.). No improvement following, she was on December 28th ordered potassium iodide, 1 gm. (gr. xv.) three times a day; emplast. cantharid., .025 mm. (1 in.) square, to each temple, besides the following:

℞. Massæ hydrargyri ..... .8 gm. (gr. xij.)
Pulv. opii..... .133 gm. (gr. ij.)

M. Ft. pil. no. xij. Sig.—One three times a day and continue until salivation appears.

On December 30th the blistering was repeated; on January 3, 1882, salivation appeared, for which she was ordered a wash of potassium chlorate, tincture of myrrh, and water.

From the commencement of the administration of the mass. hydrarg. until profuse salivation the iritis steadily improved, so much so that she assisted in a small way in

the ward duties. On January 19th, at 7.30 A.M., she took by mistake a teaspoonful of the atropia solution, .266 gm. to 32 c.c. (gr. iv. to ʒ j.), making her dose .033 gm. (gr. ss.). In a short time she complained of lightness of the head, and "feeling foolish;" nothing was thought of it, the mistake not being known. At 9.15, an hour and three-quarters afterward, symptoms of atropia poisoning developed. Pupils dilated, vision diminished, accelerated respiration, constriction of the throat, difficult deglutition, pulse 116, but weak. At 9.20 a hypodermic injection of morphia sulphate, .022 gm. (gr. ⅓), was administered; at 10.20 it was repeated; at 10.50 a third was given, pulse, 96. At eleven o'clock the thermometer in the axilla registered 96⅘° Fahr.; pulse, 96; respiration, 3 per minute, with marked symptoms of morphia poisoning. An electric battery was applied and in a few minutes another was brought into use. She responded. At 12.30, being placed upon the floor, she was subjected to violent shaking and flagellations at intervals. Her condition began to improve, at 4 P.M. she was given a few swallows of tea, for this strong coffee was substituted. At 9 she was put to bed. Her mind was not clear. During the following day her only trouble was partial loss of memory with muscular soreness. From this time she continued to improve; her sight being restored, she was discharged some weeks later. Nothing more was heard of her for some months, when in a drunken fit she jumped into the canal and was drowned.

The points of interest in the history of this case are, the complete cure of the iritis, the antidotal effects of morphia sulphate, the slowness of the respiration (3 per minute), and the subnormal temperature (96⅘ Fahr.). There can be no doubt as to the temperature, since it was taken with different instruments several times, for fear there might be some mistake in the reading or registering.

ADENOID VEGETATIONS OF THE PHARYNGEAL VAULT,

And Their Relation to Middle-Ear Disease.

By R. E. SWINBURNE, M.D.,

SURGEON TO THE HARLEM EYE, EAR, AND THROAT INFIRMARY, NEW YORK.

I PROPOSE to call attention to a class of cases that are comparatively common, accompanied by many unpleasant symptoms, and followed at times by quite serious results, yet frequently not recognized by the attending physician. Meyer, of Copenhagen, first called attention to this disease, and since then its symptoms, clinical history, and the histology of these growths have been so thoroughly studied and are so well understood that I shall not dwell long upon those points. The symptoms will depend upon how much respiration and phonation are interfered with, the amount of secretion, and to what extent the ears are involved. The nose is the natural respiratory channel, and no child will go about with its mouth constantly open when free nasal respiration is possible. In proof of this I cite the fact that in every case coming under my observation, in which a successful operation has been performed for the removal of vegetations, the patient has subsequently kept his or her mouth closed when at rest, although previously it had been constantly open. Phonation is very much hindered, especially in the pronunciation of the nasal consonants m and n. The term dead, applied to the voice by Meyer, describes it best and has been universally adopted. When the obstruction is considerable the nostrils are small, their walls thick and the nose compressed from side to side giving it a characteristic appearance. In a healthy and normal subject the anterior nasal openings are the smallest parts of the canals, and consequently when an extra amount of air is required the nasal wings are expanded and the orifices distended, but in these cases there is non-development from disease. If the children are old enough they will expectorate the secretion, but if not it will be swallowed and coughed up, and this is not unfrequently the cause of a cough that resists all expectorants and anodynes. Sometimes it accumulates in such quantities as to interfere with respiration and wake the little patient several times during the night with a severe coughing spell.

Patients with a large amount of this adventitious tissue in the superior pharynx have a sallow complexion, which, together with the open mouth and compressed nostrils, gives them a characteristic distressed and idiotic expression, more pronounced if there is much deafness. So peculiar is the physiognomy in these cases that I have frequently been able to make a diagnosis from it alone as the patient entered my office or the infirmary, and in no case has my first opinion been proven erroneous by further examination.

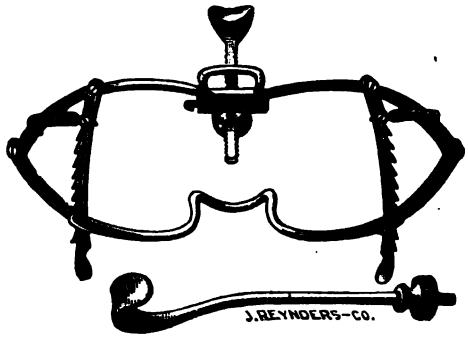
All observers report this condition as existing in children of from five to fifteen years of age much oftener than at any other period; my own records show them in patients of from three to twenty-six years. A positive diagnosis can only be made by pharyngoscopic, rhinoscopic, or digital examination. Examination of that part of the pharynx below the soft palate frequently gives valuable information as to the condition of the membrane above, from the strings of mucus and crusts dropping down, the presence of enlarged glands on the posterior wall, and hypertrophied palatal tonsils; the naso-pharynx may, however, be almost entirely filled with vegetations without a trace of the trouble existing in the lower pharynx. The necessity of examining the whole surface anteriorly and posteriorly is therefore obvious. Pharyngoscopic examination sometimes requires considerable time and patience to determine accurately the condition in unruly children, and in such cases the parts should be examined by passing the finger behind the soft palate. In this way the whole space can be explored with perfect satisfaction to the surgeon and without danger to the patient, nor is this a painful manipulation. I usually make a digital examination in cases that readily permit of an examination with the pharyngoscope, in order to obtain more precise knowledge of the existing condition. My experience enables me to confirm the statement of Meyer, that the best place for observing this class of cases is among ear patients. He says ("Medico-Chirurgical Transactions," p. 191, London, 1870): "Among 102 cases of adenoid vegetations 72 suffered from disease of the ear. Among 2,000 children of the public schools of Copenhagen (the majority being between ten and fifteen years of age), he found 20, or one per cent. of dead pronunciation, and in all met with adenoid vegetations." At the Harlem Eye, Ear, and Throat Infirmary, since its organization in January, 1882, up to September, 1883, 179 patients suffering from middle-ear disease applied to me for treatment, and of these 27, or 1 in 6½, had adenoid vegetations; 148 applied on account of throat and nasal afflictions, and of these 15, or 1 in 10, had this trouble, making a total of 42 cases among 325 throat and ear patients. Twenty-seven of the 42 cases of vegetations, or about three-fifths, had diseased ears. Of the 27 ear cases there were perforations in one or both drumheads in 14. While there was this large percentage of adenoid growths of the vaults there were only 7 cases of hypertrophied palatal tonsils, one-sixth as many as of the former.

Hypertrophied palatal tonsils have from time immemorial almost been looked upon as a cause of middle-ear disease and volumes have been written about it, while the more common and important subject of hypertrophied pharyngeal tonsil has been entirely overlooked, simply because surgeons did not employ the pharyngoscope, and consequently were of necessity entirely ignorant of the condition of the membrane above the palate. In my experience enlarged palatal tonsils is only a part of a general catarrhal condition of the upper air-passages, is, in the great majority of cases, accompanied by ade-

noma of the vault, and is very much less common than the latter. Among the patients who applied for treatment of middle-ear disease, not accompanied by adenoid vegetations, there was well-marked naso-pharyngeal catarrh in nearly every case. My patients suffering from catarrhal throat affections almost invariably tell me that at different times they have been somewhat deaf, had tinnitus aurium and other common symptoms of otitis media, but it soon passed off and they considered it a trifling matter. If the hearing power of patients suffering from nasal catarrh be carefully tested it will frequently be found less than normal, although the subject is entirely unaware of the defect. Careful inquiry and study of these cases has convinced me that middle-ear disease not secondary to and the result of disease of the naso-pharynx is uncommon, and that the pharyngoscope and rhinoscope are as essential as the otoscope in making a correct diagnosis and applying proper treatment. I feel I have not done my duty to any patient that applies to me for treatment of a middle-ear affection until the nose and superior pharynx have been thoroughly examined. Upon this point Politzer says ("Diseases of the Ear," p. 303): "Experience teaches that when the naso-pharyngeal affection ceases the consecutive inflammation subsides, but that in a number of cases the inflammatory swelling and secretion in the middle ear continue, with the development of all the consequences I have already enumerated. On the other hand, in primary, or even in secondary affections of the middle ear, the inflammatory process, especially the swelling of the Eustachian tube, is maintained and recovery hindered by complication with or continuance of a naso-pharyngeal affection. From this may be seen the importance of minute examination of the naso-pharynx and the employment of rational treatment for the removal of an existing naso-pharyngeal affection as one of the principal conditions for affecting a favorable result in the numerous obstinate cases thus complicated." The aural disease accompanying adenoid vegetations of the pharyngeal vault is said to have been produced in three ways: First, by the pressure of the growths upon the mouths of the Eustachian tubes; second, by their interference with the circulation of air through the nose; and third, by an extension of the inflammation to the middle ear. My own belief is that it is caused almost, if not entirely, by an extension of the inflammation, during an attack of acute naso-pharyngeal catarrh to which patients in this condition are predisposed.

Patients present themselves with aural catarrh and purulent middle-ear disease as the result of nasal catarrh many times more frequently than they do with these troubles in connection with adenoid vegetations. All of the cases of acute middle-ear disease accompanied by adenoid vegetations that have come under my observation, have also had acute pharyngitis. In the great mass of these cases, applying on account of the ear complication, the vegetations are so small as not to press on the tubes at all, and do not interfere with respiration sufficiently to prevent the proper amount of air reaching the middle ear. The question now arises, whether operation for the removal of the vegetations is advisable or not. No ill effects have followed operation in any of my cases, and I believe none need ever occur if properly performed, but, on the contrary, the ears and general health may be very seriously damaged if left to nature. These growths must, of course, be approached either through the nose or through the mouth from behind the soft palate.

There have been five methods proposed for their removal, and used with varying success: 1, the curette; 2, caustics; 3, galvano-cautery; 4, the wire loop, which may be either the galvano-cautery loop or the écraseur; and 5, the forceps. The only difficulty experienced in removing a hypertrophied pharyngeal tonsil is its inaccessibility. The nostrils are narrow and slit-shaped, through which only the smallest instruments can be passed, and any manipulation in these cavities is always accompanied with considerable pain, so much so that children especially are unable to maintain the quietude necessary for the successful and easy performance of the operation. A very large percentage of these cases are also accompanied by hypertrophic rhinitis, which still further encroaches upon the calibre of the canals. In many instances it is simply impossible to pass any instrument through one nostril, on account of a deviation of the septum or an exostosis. Although the passage through the mouth is large the obstacle that has always been experienced is the spasmodic action of the soft palate, which instantly takes place upon the slightest irritation of the pharynx, thereby cutting off all communication. Palate retractors have been devised and employed, but they have all hitherto required the use of one hand for their manipulation, a fact that very seriously affects their utility. The method of passing strings through the mouth behind the palate, out of the mouth and then tying the ends over the upper lip is a very useful procedure, but does not counteract the action of the levator-palati muscle and consequently is not an entire success. The desideratum has been an instrument that will at once keep the mouth open, the palate retracted, and overcome the action of the levator-palati muscle. These objects are obtained by the use of the instrument made for me by J. Reynders & Co. It consists of a mouth-gag, differing from Whitehead's only in the absence of



a tongue depressor and the addition of a palate retractor. The palate retractor, devised by myself, is a broad, flat hook with a small round shaft, having a thread upon its whole length and a nut. To the mouth-gag I have added a bar with a slot and slidebolt. When the gag is properly placed in the mouth the bar will be just beneath the upper incisor teeth and parallel to them. After the gag has been inserted between the teeth and opened, the retractor is to be hooked behind the palate, drawn forward, the stem inserted in the slot, the bolt shoved beneath it, thus firmly holding it in place, and finally the nut on the stem is to be screwed up. I have used this instrument in fifteen cases of adenoid vegetations of the pharyngeal vault and find it to be all that is desired. In doing this operation I always give ether, because, first, it is quite painful; second, in children it is sometimes difficult to see the throat, and always impossible to operate there without restraining them by force; and third, there is no objection to it. The curette was Meyer's instrument, but he distinctly states (op. cit.): "One operation rarely succeeds in removing all of the vegetations, so that it often requires to be repeated. When the vegetations are of soft structure I employ cauterization with the solid nitrate of silver. In some few instances neither the operation nor the after-treatment by the use of caustics and the pharyngeal douche has succeeded in removing all traces of the vegetations." He also reports severe reaction, which in some instances resulted in perforation of the drumhead.

This method of treating the affection was original with Meyer and used by him more than by any other surgeon. Therefore, after reading the above opinion of it by its author, no further argument will be necessary to con-

vince us that it is not all that is to be desired. The second and third methods—namely, destruction by caustics and cautery—act upon the same principle, differing only in degree. After a considerable experience with such caustics as the saturated solution of chromic acid, sulphate of copper, the tincture of iodine, etc., I have entirely abandoned them, convinced they are useless in any considerable hypertrophy. The galvano-cautery I have employed in a number of favorable cases, but have never succeeded in curing any of them. It is a very painful procedure, difficult to perform in adults, almost impossible of accomplishment in children, and requires several applications, extending over a period of weeks; serious damage to the healthy parts is unavoidable and the cauterization is always followed by a good deal of inflammatory reaction. In my opinion this treatment should never be employed in the naso-pharynx, although for the treatment of the extreme hypertrophies of the tissue covering the turbinated bones it has afforded me better results than any other agent. With the aid of a speculum and ivory slide, introduced by Dr. E. S. Shurley, of Detroit, the turbinated bones can easily be cauterized without endangering the healthy parts, and in my hands many cases have yielded to this plan of treatment that resisted all others. The fourth plan is either the galvano-cautery loop or the cold wire snare.

Before the introduction of the Jarvis snare I removed post-nasal growths with an écraseur mounted with copper wire, but found great difficulty in getting it through the nose and over the tumor, simply because it would bend whenever it impinged against the solid parts, and of course the same is true of the platinum wire, but the steel wire will spring over a tumor without bending, thus permitting the surgeon to draw it down to the base or pedicle, and by turning the nut cut it off. The Jarvis snare is a single round tube that can be readily turned in the nostril, while the cautery loop of necessity consists of two tubes, making it much wider and of course requiring a correspondingly larger space to be turned in. The former will cut off anything one is required to remove here, and as it is cheap and always ready, while the latter is both costly and troublesome, I much prefer the snare. The modification of the Jarvis snare for use behind the palate, introduced by Dr. Bosworth, is superior to any other with which I am familiar, but the objection to it is the tediousness of the operation to both surgeon and patient. Large growths can be removed in this way without trouble, but the smaller ones in children of from three to ten years of age, who come under the care of the aurist on account of the accompanying ear disease, are very difficult to treat by this method. Many of them are simply broad, flat cushions, attached to the vault without any constriction at the base, and to which it is almost impossible to attach a snare even in adults who will tolerate the pain and discomfort, but in children it is still more difficult, for they resist as much as possible. Removal of these growths by the snare through the nose is generally much more difficult than through the mouth.

We now come to the consideration of the fifth method —the forceps. Dr. Cohen, in his book "Diseases of the Throat and Nasal Passages," p. 262, says: "When the vegetations are large and the parts can be educated to quietude under manipulation the growths can sometimes be seized with properly curved forceps and be torn off or crushed off as the case may be."

This is as favorable an opinion as any one can give, unless the movements of the palate can be controlled. With the mouth-gag and palate retractor I have shown you, properly curved forceps, and the patient fully anæsthetized, the whole growth can be removed while the patient is recovering from the anæsthesia. Everything that can be taken hold of with the forceps should be removed, and then the index finger should be passed behind the palate and any shreds or small pieces found are to be scraped off with the finger-nail. This operation is adapted to all cases, but especially to those in which the vegetations are small, and in children who will not tolerate operative interference. The great advantages of it are, that it is radical—that is, the vegetations are all removed at one operation, there is never any inflammatory reaction, and it can be performed in less time than any of the other operations. There is no more hemorrhage in removing them in this way than in any other, and it ceases spontaneously as soon as the operation is completed.

Most of these cases are accompanied by hypertrophy of the tissue covering the turbinated bones, and in those cases I apply the galvano-cautery to them after the patient has been anæsthetized, but before removing the adenoid tissue. If this hypertrophied erectile tissue is not destroyed, the patient will still be unable to breathe through the nose, and I have not yet found any agent that acts so promptly and efficiently here as the cautery. Although there is always considerable inflammation following the use of the cautery, I have never yet seen any harm result from its use in the nose.

I wish particularly to call attention to the difference between its use in the nose and the naso-pharynx. In the nose the healthy parts can be protected, the application limited, and it is entirely under the control of the surgeon. In the naso-pharynx the healthy parts are seriously damaged, the mouths of the Eustachian tubes frequently more or less burned, resulting in acute inflammation of the middle ear, and all of the serious consequences so liable to follow. I very frequently employ the galvano-cautery in treating hypertrophic troubles of the nose, and have never seen any evil results from its use, but, on the contrary, have obtained very decided benefit in every instance.

The first case I operated upon in this way was S. C. B ——, aged six, with chronic aural catarrh, hypertrophy of the turbinateds, and pharyngeal tonsil. He was referred to me by Dr. Ira B. Read, who kindly assisted me in the operation. The patient was etherized, the turbinateds cauterized, and the vegetations removed with the forceps, the mouth and palate being controlled by the instrument I have shown you. I did not see the boy again for some three weeks. At this time his mouth was firmly closed, although it had been constantly open before the operation, and upon examination the superior pharynx was found entirely free from vegetations, while the turbinateds were so much reduced in size as to permit of free nasal respiration. The ears were also very much improved, and have since given him no trouble. The mother volunteered the information that the bad odor of the breath, and all the other unpleasant symptoms from which he had suffered so long, had entirely disappeared, and she considered it a very successful operation.

Since then I have operated in this way fifteen times, and in only one case failed to remove the whole mass at one operation. In this patient there was a small piece left just back of the septum, and although it was so small as not to interfere with respiration, I removed it with the nail of my index finger. The final result of this case was a perfect cure.

PARALYSIS FOLLOWING SIMPLE CATARRHAL SORE THROAT.—Dr. Lentz reports in the *Gazette Médicale de Strasbourg* for September 1, 1883, two cases of catarrhal sore throat followed by grave visceral lesions. In the first case there was albuminuria, and in the second paralysis of the lower extremities and retention of urine. From a study of the cases he concludes as follows: 1. Simple catarrhal sore-throat may be followed by grave phenomena, such as albuminuria or paralysis. 2. It seems to be in some cases the manifestation of miasmatic poisoning. 3. The paralysis is the result of a direct and specific action of the virus, upon which depends also the sore throat, and is not, as claimed by some, due to weakness following acute disease.

Progress of Medical Science.

CROTON-CHLORAL IN THE TREATMENT OF PERTUSSIS.—In a paper read before the Kentucky State Medical Society (*American Practitioner*, August, 1883), Dr. W. C. Webb speaks very highly of croton-chloral in whooping-cough. He has treated a large number of cases with this remedy, and claims to have obtained a cure in nearly every instance within two weeks. The drug must be given in large and continued doses to obtain the best results. To a child one year old he gives one grain of croton-chloral every four hours. Children from ten to twelve years of age will bear two grains at a dose. After the first week the cough is generally so much improved that the remedy may be given less frequently. It is, of course, necessary to watch carefully the effects of the drug, so as to avoid the production of toxic symptoms.

INTESTINAL OBSTRUCTION CAUSED BY A CALCULUS.—Dr. Magnin relates in the *Journal de Médecine et de Chirurgie Pratiques*, for August, 1883, the case of a lady who, for several days, had suffered from obstinate constipation, and complained of violent pain in the abdomen. Purgatives of various kinds were administered, during five days, without effect, except to induce bilious vomiting and increased pain. At the end of this time the obstruction was relieved by the passage of a calculus the size of a duck's egg, of ovoid shape, and rough on its surface. The composition of the mass was the same as that of biliary calculi.

TREATMENT OF WARTS BY CALCINED MAGNESIA.—Various contributors to recent French periodicals have been relating their experiences in the treatment of warts by the internal administration of calcined magnesia. They all report favorably concerning it. The plan is to give seven or eight grains of magnesia per diem, and a cure of the disfigurement is said to be obtained in the course of one or two months. Dr. Lucas Championnière (*Journ. de Méd. et de Chir. Prat.*, August, 1883) suggests the trial of this same remedy in the case of epithelioma, and thinks that possibly we might obtain equally favorable results in this affection also.

REFLEX PARAPLEGIA.—Dr. Thomas Oliver relates, in the Liverpool *Medico-Chirurgical Journal* for July, 1883, two cases of paraplegia associated with morbid conditions of the genito-urinary apparatus, which would seem to be confirmatory of the theory of the reflex nature of paralysis in certain cases. The first patient was a man, forty-six years of age, of temperate habits, and without any history of venereal disease. He was working one day in a garden, when he suddenly experienced a severe pain in the back, which became so intense that he started for home. Before proceeding far, however, he began to stagger and soon lost all power in his legs. A fortnight later he was brought to the infirmary in a condition of complete paraplegia. He still complained of pain in the back, and at night there was subsultus tendinum, during which the pain was more severe. There was difficulty in passing water, and the flow would sometimes be suddenly arrested. Exploration of the bladder with a sound gave negative results. The urine contained a quantity of pus, and on a few occasions he passed a little blood. There was no rigidity of the muscles, and the plantar and patellar reflexes were normal. A localized area of dulness, extending from the eleventh rib to the crest of the ilium was detected, which was also extremely painful on pressure. A renal calculus was suspected, and a long needle passed into the right kidney came in contact with a hard gritty substance. Under the influence of rest and remedies administered for the relief of pain, the patient recovered the full use of his limbs, and has remained well. The second case was that of a lady, twenty-eight years of age, who had completely lost all power in her legs. Sensation was normal, and there was no muscular rigidity. Vaginal examination revealed the existence of retroflexion of a heavy uterus, the lifting up of which was painful. As she had not menstruated for three months there was a possibility of pregnancy. Complete return of power in the limbs followed treatment of the uterine condition. The loss of power was stated not to be hysterical. Dr. Oliver concludes, from a study of these and other similar cases, that paralysis may be purely reflex in character, and he thinks that the term reflex paraplegia should be retained in our classification of diseases.

CARDIAC ECTOPIA.—Considerable interest was manifested at a recent *séance* of the Académie de Médecine of Paris, by the exhibition of a case of pregnancy at the ninth month, by M. Tarnier. The woman was a secundipara, and the sternum was bifurcated at the lower part, so that the beats of the heart were seen to take place immediately beneath the skin of the epigastric region. It was stated that the ventricular part of the heart could be seized between the fingers; by palpation over the upper part of the notch the contractions of the auricles could be detected. Apparently the diaphragm does not exist at the site in question. M. Marey said that this specimen of teratology would no doubt permit a verification in man of observations made upon the heart of animals. M. Beau had explained the beat of the heart as due to dilatation under the influence of the afflux of blood at the time of the ventricular systole. According to him the apex of the heart contracts during the diastole. In the case of ectopia, on the contrary, it was easy to perceive that the ventricle was soft during the diastole and hard during the systole; in the latter period the apex of the heart strikes the thoracic wall.—*London Lancet.*

SURGICAL INTERVENTION IN TUMORS OF THE BLADDER.—In a memoir read before the Société de Chirurgie of Paris (*La France Médicale*, August 4, 1883), Dr. Bazy sums up the indications for operation in vesical tumors, as follows: 1, in the case of a pediculated tumor, an operation is justifiable whatever the functional troubles may be; 2, when the tumor is sessile, an operation should be deferred until functional troubles present themselves; 3, when the suffering is intense, and death is inevitable from the results of pain and hemorrhage, entire ablation of the organ should be practised, a hypogastric fistula being formed. The contra-indications are classed under four heads: 1, the generalization of the neoplasm; 2, close adhesions to other organs—the most that could be done in such case would be the establishment of a permanent fistula; 3, diffuse infiltration of the walls of the bladder by the new growth—in such a case a fistula, if established, would be speedily closed by the neoplasm; 4, acute nephritis or advanced secondary degeneration of the kidneys. A commencing lesion of slight extent might be arrested by operation upon the bladder. The best mode of operating, the author thinks, is by hypogastric section. This gives a large opening into the bladder, is seldom followed by any immediate evil results, and is the most convenient location in which to establish a permanent fistula. Hemorrhage is at first a little abundant, but it quickly ceases. Extravasation of urine is not to be feared, but of course, free drainage should always be provided for. Perineal section is much less suitable, except in a very small proportion of cases.

PAROSTEAL SARCOMA OF THE RADIUS.—The following case is related by Mr. Henry T. Butlin in *The Lancet* for August 11, 1883: A strong, healthy-looking man was admitted to hospital on April 8, 1882. On the radial side of the left forearm, about midway between the elbow and the wrist, was a tumor as large as a small fist, but lobed and elongated. It presented toward the front, as well as on the outer side. The tumor was tense, fluctuating on the outer side, but firm toward the front; the skin covering it was stretched, but not discolored. In the axilla was one enlarged gland about the size of a

small nut. The man said that for four months he had been conscious of the presence of a lump in the forearm; but it had grown very slowly, and without pain, and therefore had not prevented him from pursuing his occupation, until about six o'clock on the previous evening, when suddenly, without warning and without any evident cause, it began to enlarge, and in less than half an hour had doubled its previous size. The enlargement was accompanied with excessive pain, which at once rendered him incapable of continuing his work, and compelled him to seek advice. The diagnosis was sarcoma of the radius, probably subperiosteal, which had enlarged from sudden hemorrhage. He was put to bed, the arm laid on a rest, and cooling lotions were applied. But the pain continuing unabated, it was decided to operate. An Esmarch's bandage was applied, and then a free incision was made into the tumor. A large quantity of clotted blood was turned out, but the bone, contrary to expectation, was nowhere bare. It was decided, in spite of the apparently malignant character of the tumor, not to amputate, but to scoop out the new growth and endeavor to save the limb. This attempt was successful, and though two small recurrent tumors have since been removed from the cicatrix, the patient has a useful arm, and has remained free from any appearance of the disease in other parts. Microscopical examination showed the tumor to be a spindle-celled sarcoma. Mr. Butlin thinks that a parosteal sarcoma is much less malignant than a subperiosteal tumor of the same nature, and he regards the attempt to save the member in such cases as certainly advisable.

Adonis Vernalis as a Heart-Tonic and Diuretic.—This plant has been for a long time in use in Southern Russia as a popular remedy in the treatment of dropsy, but has not hitherto been submitted to scientific investigations made with a view to determine its physiological and therapeutical action. Professor Botkin has recently employed it extensively in his clinic at St. Petersburg, and Dr. Bubnoff presents a report of the results obtained (*Allgemeine Medicinische Central-Zeitung*, July 28, 1883). It was found to be of value in those cases of dropsy only in which there was pre-existing cardiac disease. After the administration of adonis vernalis the heart-beats were much strengthened, the size of the organ was diminished, and its tones were much louder. The systolic murmur of aortic stenosis especially was intensified. The heart's rhythm became more regular, and the pulse slower and fuller. The daily excretion of urine was increased largely, sometimes rising from ten or twelve ounces to eighty or ninety ounces in the twenty-four hours. In cases in which there was no actual lesion of the kidneys the albumen and casts disappeared. The subsidence of œdema went hand-in-hand with the increase in the amount of urine excreted, and at the same time the secondary symptoms depending upon œdema of various organs disappeared. The patients expressed themselves as feeling much better. The remedy was given in an infusion of the strength of ʒ j. to ʒ vj., to which two drops of oil of peppermint were added. The dose of this infusion was a tablespoonful every two hours.

A Dynamic Theory of Cholera.—Dr. John Chapman writes to the *Journal de Médecine de Paris*, of August 25, 1883, giving his views concerning the nature and treatment of cholera. He regards the disease as consisting essentially in hyperæmia of the spinal cord and sympathetic nervous system, upon which condition depend all the phenomena observed prior to the stage of reaction. His treatment consists in the application of heat to the entire surface of the body, while at the same time an ice-bag is applied along the spinal column. This application is continued as long as the symptoms of the algide stage (vomiting, intestinal discharges, and cramps) persist. The reaction sometimes becomes excessive, and then it is necessary to remove the ice-bags and apply heat to a part or the whole of the spine. He had an opportunity, during the cholera epidemic in Southampton in 1865, to test his method in several cases of more than average severity, and claims to have met with more than the average success. He advances the following conclusions as embodying his convictions: 1. Although in exceptional cases cholera may present itself associated with blood-poisoning, it is not, as a rule, the result of this poisoning. 2. No proof has ever been forthcoming of the existence of a cholera poison, and there are strong reasons for believing that it exists only in the imagination of certain pathologists. 3. The existence of the so-called "cholera germs" is equally hypothetical. 4. Cholera does not travel from country to country. 5. The disease is produced *de novo* wherever certain determining conditions exist. 6. There are the strongest reasons for believing that cholera is neither infectious nor contagious. (The author admits, however, that the influence exciting the disease, in the centres of a cholera epidemic, may be felt by those who are not actually attacked. And, furthermore, since this influence renders all those within its sphere susceptible, the emanations from cholera patients, as well as all other impure and unhealthy emanations, may act as exciting causes.) 7. International regulations, by means of which various governments endeavor to resist the invasion of cholera, are of no avail; while the development and continuation of the disease are, in all probability, often favored by the restraint imposed by useless, and consequently unjustifiable, quarantine laws. 8. Although the exciting causes of the scourge are numerous and varied, cholera is essentially, invariably, and exclusively a phenomenon dependent upon abnormal excitation of the nervous system. 9. The chief element of a rational treatment of cholera consists in exercising a powerful and essentially sedative influence at once upon the sympathetic nervous centres and the spinal cord.

Chloroform Internally Administered.—This anæsthetic has enjoyed some repute of late in France as a remedy for the relief of pain when internally administered. It is prepared for this purpose in the following way: A flask is about three-fourths filled with distilled water and an indefinite quantity of chloroform added. It is then thoroughly shaken at frequent intervals for about an hour and then set aside. When the upper part of the mixture becomes perfectly clear it is decanted from the cloudy deposit formed by the excess of chloroform at the bottom. This "water of chloroform" is of the strength of about nine parts per thousand. Diluted with an equal amount of distilled water it has a most happy effect in the pain or nausea attending the process of digestion in dilatation of the stomach. Dr. de Beurmann recommends it also in pain accompanying organic disease of the stomach, in nervous vomiting, and in the vomiting of pregnancy. It is of rather agreeable flavor, and may be advantageously employed in combination with orange-water as a vehicle for the solution of chloral and other hypnotics, and also of salicylate of soda. At ordinary temperatures it is a stable preparation, and uninfluenced by the action of light.—*La France Médicale*, August 28, 1883.

Treatment of Croup by Sulphide of Calcium.—In a communication read before the Medical Society of Rheims (*Union Médicale du Nord-Est*, August 15, 1883), Dr. Meunier reported upon a number of cases of croup treated by sulphide of calcium in doses of three to four and one-half grains per diem. The remedy was given in granules of one-tenth of a grain each, one or two granules every hour. The author regards the sulphides as of great value in the treatment of diphtheria and croup, while not being, strictly speaking, antidotal to the specific poison of this disease. Their mode of elimination, in great part by the pulmonary mucous membrane, is a further recommendation for their use. Dr. Meunier's success in the cases recorded was not startling, yet was such as to warrant further trial of the sulphide of calcium in this disease.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 6, 1883.

IDIOPATHIC ANÆMIA OF ADDISON.

IT is now almost thirty years since Addison first described idiopathic anæmia, or, as it has been called since the appearance of Biermer's paper, in 1871, progressive pernicious anæmia. Even at that time, with only one case, its clinical characteristics, its course, termination, and *post-mortem* appearances were so accurately described that we may accept his description as true to the life to-day. True, up to the time of Addison's description (1855) seven cases of an unknown and undiagnosed disease had been partially described, but it is to the great physician of Guy's that we are indebted for much that we know of its clinical history.

A most interesting and instructive paper on this subject now appears in "Guy's Hospital Reports" (vol. xli., 1883), by Dr. P. H. Pye-Smith, in which he gives the complete clinical history of a case coming under his care at the hospital, with tables of all recorded cases up to the time of the writing. The case reported by Dr. Pye-Smith lived almost a year after entering the hospital. The patient, a male, had noticed an alteration in his complexion about a year before that time, and almost at the same time his skin became covered by little blisters, similar to those produced by stinging-nettles, which produced itching and stinging. Dyspeptic attacks, to which he had been subject, became more frequent, and soon the well-known symptoms of the disease became well marked. These, as is well known, are a pallid, yellowish skin—warm, moist, and soft, with the veins showing clearly through it on the extremities; white, pearly conjunctiva; pale, sodden, flabby tongue; great paleness of the oral and buccal mucous membrane; breathlessness on exertion; cardiac murmurs, generally systolic, bruits being also heard over the axillary, carotid, femoral, and subclavian arteries, sometimes over smaller vessels, and, as a rule, a *bruit de diable* is heard over the cervical region. Hemorrhages into the retina, though sometimes found, are not constant. When they do occur they are usually very small, and very numerous. The pulse is rapid at the onset, not unfrequently dicrotic, full in the early stages, collapsing, and compressible; and the temperature one or two degrees above normal, though when death is imminent it may sink to 95° Fahr.

The examination of the blood, however, furnishes, we may say, the most important clinical symptom. The hæmal unit is markedly decreased, as was well shown in the case reported, in which it was 38.4, being only a little more than one-third of the normal. This proportion gradually, in some cases rapidly, decreases. The blood has a pale, thin, watery appearance, and is very transparent; the coloring matter being reduced in some cases to only twenty-five per cent. of normal, and the proportion of red corpuscles may fall below one-eighth, and when examined they are seen to have lost their spherical shape in many instances, are often crenated, and the coloring matter is irregularly collected either in the middle of the corpuscle, or eccentrically, and the tendency to form rouleaux is absent. There are various other and more rare minor symptoms, such as epistaxis, vomiting, etc., and there may be anorexia, though this last is by no means general.

Some of these will be recognized as symptoms occurring in every case of anæmia. There is breathlessness on exertion because the red corpuscles—the carriers of oxygen to the tissues—are diminished; and muscular weakness affecting both the voluntary and involuntary muscles from the same cause; coldness of the feet; passive exudations; and paleness resulting from the loss or decrease of hæmoglobin, with functional murmurs in the heart and great vessels; and fatty degeneration of the organs from deprivation of nutrition. It is, however, beyond our scope at present to enter into a consideration of the various anæmiæ which may result either from loss of the normal constituents of the blood from an appreciable and known cause, or from a diminished increase of blood-forming material, or from an increased destruction of formed elements. Two affections are now recognized which are not dependent upon any of these causes, but idiopathic or pernicious anæmia, and chlorosis, though having these points in common, are so different that it is unnecessary to enter into a differential diagnosis in this place.

Dr. Pye-Smith conveniently classifies anæmia under three heads: 1, Those cases which are secondary and symptomatic; 2, cases associated with diseases of the cystogenic organs, whether or not lucæmic; and 3, idiopathic, primary, or essential anæmia without any symptoms during life, and without any lesions after death which cannot be explained as directly due to anæmia. From the first group of cases idiopathic anæmia is distinguished by its severity, malignant character, retinal and other ecchymoses, and by the increased temperature and almost invariably fatal result; and from the second by the absence of lucæmia, the structural changes in the red corpuscles, and the absence of any especial enlargement of the spleen, or lymph-glands. Though our knowledge of the pathology of idiopathic anæmia is not sufficient to enable us to explain it, we believe that we are authorized in holding that it depends upon a too rapid and extensive destruction of red blood-corpuscles. Certain it is, that we have the evidence of this destruction and increase of pigment in the deep color of the urine, in the yellow tint of the skin, and in the saturated tint of the fat and muscles, the occasional pigmentation of the serous membranes, and possibly, also, in the excess of iron sometimes detected in the viscera, which it is suggested may be derived from broken-down hæmoglobin; it is possible, however, that it may be due to the ingestion of iron as medicine.

Age, sex, and occupation seem to be of but little

moment in the etiology of this affection; it is rather more frequent in earlier adult life, seems to be about equally common in males and females, and is probably more frequently seen in the lower classes, and outside of large cities. The fact that it sometimes comes on without any assignable cause, not only renders its etiology and pathology obscure, but makes it doubtful whether the sometimes detailed states, as dyspepsia, pregnancy, privation, and various discharges, are to be regarded as more than coincidences, though Coupland, in thirty-one cases, assigns pregnancy and the puerperal state as the cause in twenty cases, and the remaining eleven to privation.

As before stated, the evidence furnished by an examination of the blood is especially valuable. As regards the white corpuscles, they are, as stated by Wilks so early as 1857, not materially increased. Occasionally they may seem to be present in larger than normal quantity, but this is only due to a transient leucocytosis, and in several cases the number has seemed even to be diminished. The red corpuscles, however, may be enormously decreased—are always, in fact, much below normal, and are pale. The pale, watery condition of the blood, therefore, is due not only to the diminished number of red corpuscles, but probably also to a seeming deficiency of hæmoglobin. As regards this point there seems to be a difference of opinion. Dr. F. Willcox states (*Practitioner*, August, 1883) that the hæmoglobin value is largely increased, and Hayem found in one case that though the color of the blood was diminished from a normal of one hundred to ten, the number of corpuscles was only about one-tenth, so that there was no diminution of hæmoglobin in each corpuscle. The size of the red blood-disks is, however, largely increased, as stated by Eichhorst, Kohler, and Willcox, sometimes being so high as 9 mm. and even 12 mm. This is a valuable point in the diagnosis between idiopathic anæmia and chlorosis, if it be a constant condition, for although a few giant disks are seen in chlorotic blood, the average size is markedly diminished. In making the *diagnosis*, then, of idiopathic anæmia we cannot do better than quote Dr. Pye-Smith, who gives its characters as: 1, Absence of organic disease and of any recognized and sufficient cause of anæmia; 2, absence of uterine and ovarian complications; 3, severe and ingravescent anæmia; 4, irregular and occasional pyrexia; 5, retinal hemorrhage; 6, diminution of red blood-disks without lucæmia, and presence of small, deeply colored, red corpuscles; 7, maintenance of adipose tissue.

The treatment of pernicious anæmia, though by no means gratifying, or as yet well determined, is not entirely futile, for cases do recover. Pye-Smith records twenty recoveries out of one hundred and thirty collected cases. *Imprimis*, it may be stated that iron is of no value in these cases. Though it is a necessary constituent of the blood-coloring matter, it cannot increase the number of the corpuscles, and in this disease we have reason for asserting that the addition of younger red corpuscles is almost entirely suspended. According to Willcox, it seems that iron not only does no good, but is actually harmful by irritating the stomach and causing vomiting. In this form of anæmia we must, at present, accept one of two theories; either that the power of corpuscle formation is suspended, or almost entirely abolished; or that the young corpuscles, if formed, have little or no power to absorb hæmoglobin, and consequently do not reach their full development, and the concentration of the coloring matter in a few large corpuscles, as claimed by Willcox, may be due to a compensatory process by which oxygenation of the tissues may still be carried on, even with the great numerical reduction of the corpuscles. The end and aim of all treatment in these cases is to increase the number of corpuscles, and since the administration of iron cannot accomplish this, theoretical and clinical reasons are against it. Arsenic, however, may and does, in many cases, produce not only an increased number of red corpuscles, but improves the general symptoms. Though, as a matter of course, we cannot suppose that iron is a specific for the disease, some excellent results have been obtained by its administration. This and transfusion, with careful diet, seem to offer the only hope for the subjects of idiopathic anæmia. Quincke recommends transfusion into the radial artery, but we do not see that arterial transfusion is at present to be preferred, except that there is less danger of introducing air than when a vein is opened. Five cases have had recovery follow transfusion, and arsenic has given still better results, though oftener used.

THE MIDWIFE AND HER RELATION TO THE PHYSICIAN.

The recent efforts made to legalize a State Board of Examiners for the medical schools, together with the prompt recognition and suppression by the County Medical Society of quackery in this city, has awakened an interest in medical education and legislation that bids fair to elevate the professional standard.

Coincident with this a movement is rapidly spreading among the larger cities throughout the country for the employment of intelligent women as nurses for the sick and to attend women in labor. It may be traced in part to the growing demand for opening a new field and offering women of the better classes increased facilities for self-support, but chiefly to recent advances in medical and surgical practice, which require nicer care and closer observation of the sick than untrained helpers can give. To supply these needs, "training schools" for nurses have been established in connection with certain of the larger general hospitals; while in this city a "College of Midwifery" has been recently organized.

The author of this paper desires to call the attention of the profession to this matter, so that the proper relation of the midwife to the physician may be determined. The time has come when the profession must concede to the midwife a legitimate place in the community. A writer, in the *New York Medical Journal* of April 14th, of an editorial on this subject, says: "With the continued immigration constantly going on, there are now thousands of poor women who, if compelled to make the choice between the attendance of a medical practitioner and a resort to some public charity, would find themselves under the necessity of adopting the latter expedient. Most of the midwives in the United States are of foreign birth and training, if they can be said to have been trained at all, and their ways do not commend them to people of American birth. Hence many a woman that could have

afforded her services has shrunk from the experiment and become a burden on the community. With proper facilities for their education, and special legislation to protect them, there is no reason why a class of intelligent, well-educated American midwives should not arise amongst us. The result of such a change cannot but prove conducive to the welfare of all concerned. Members of the profession who, for one reason or another, practise obstetrics for fees utterly out of proportion to the value of the services rendered, will not suffer to any great extent by the establishment of a class of trained midwives; for the latter will draw their support rather from those who now pay no fee at all than from those who are able to employ even the humblest practitioner of medicine." That the writer's views are correct no one will deny; for further confirmation we can turn to France or Germany, where the midwife is as essential in the community as the curate, the lawyer, and the doctor. Her importance has been recognized, and, in order that her calling may be protected against the invasion of unqualified women, the State erects a legal barrier in the shape of a strict examination. If midwives in the United States were what they should be, or what they are compelled to be in Germany, there would be no need of any special legislative enactment; but unfortunately they are not. They are as a rule ignorant, and, worse than all, their ignorance is fearless; the evil done by their malpractice is beyond comprehension. Any physician who makes a speciality of obstetrics and diseases of women, and even one whose practice is not extensive in this direction, will be able to relate many cases where, through the brutish ignorance and stupidity of some midwife, a woman or her child, perhaps both, have died, to say nothing of the many uterine diseases traceable to her mismanagement.

Recognizing these facts, it is time that the profession should make some effort to elevate the midwife to her proper position in the community. It is not necessary to lay open the entire field of obstetrics to the midwife. On the contrary, her practice should be strictly limited; the knowledge imparted serving to indicate to her not only how to manage a normal labor, but above all when to send for a physician, and what to do pending his arrival.

Thus instructed, with proper legislation to protect the people from incompetency, the midwife's relation to the physician would be established, and her position in the community made useful and necessary.

AN INSIDE VIEW OF A COUNTY MEDICAL SOCIETY.

We have received from a correspondent in Pittsburgh, Pa., a letter giving a very dolorous account of the state of medical affairs in that city. We are unfortunately compelled to believe that the recital is very little exaggerated. The Allegheny County Medical Society is, we are told, in regular affiliation with the State and national associations, yet it contains many members who do most questionable acts, still professing adherence to the Code.

Says our correspondent: "One of our 'popular' members advertised for a year in the daily press that he had resumed the practice of his profession, while some physicians were not aware that he had ever quit it voluntarily. And again for the past year he has been advertising as giving 'special attention to diseases of the eye, ear, nose, and throat.' Another member, who has been abroad, upon his return requested the press to announce the fact with certain additions as a matter of news.

"For several months an advertisement of two lines has met my eye, to the effect that a physician, who has been abroad, has reopened his office. And I am told that one of our specialists, who has a private hospital, has been so unsuccessful in his operations as to have acquired for it the name of 'Pittsburgh Abattoir,' in spite of all his self-laudation.

"As to boasting of cures and remedies, a thing proscribed by the Code, it is far too common to hear members of our society not alone boast, but even intimate that they 'know it all,' and that other physicians are unfit to treat certain cases.

"Certain of our members keep selected formulæ at favored drug stores, and write for 'my mixture,' etc., and, it is reasonable to think, exact percentages of those druggists. In one instance, a pharmacist informed me that having received a prescription for 'my application No. 1,' called upon the doctor (who has held many offices in the society) to find out what 'No. 1' meant, and was impolitely told that 'if he didn't know, he'd better take it to ——, who did know.'

"Some old physicians attend families by the year, at ten dollars per head—a practice most unjust to young physicians, undignified and abominable. There are in our society 'no-diploma fellows' and eclectics. One member, I am reliably informed, practises 'both systems,' regular and homœopathic. And others examine in lunacy cases on the same commission with homœopaths, sign the same certificate, and justify themselves by saying, 'That's all right; it's not a consultation.' But it is professional association.

"I tell you truly, sir, there are quacks in our county society, and the thin veil of the Code cannot shield them. But since the death of the revered Dr. James King, there seems to be not a man in it with stamina to point them out. And, to our disgrace be it said, many bright practitioners, desiring not the association of such men, are not members of the society; and some others who are, contemplate resigning, the only link that holds them being the fact that membership here is compulsory to membership in State and national societies. To belong to our society is no honor. In this county a code should be individual."

Our correspondent further states that a project is on foot to start a medical college in Pittsburgh, and he deplores the consequences of such an undertaking. "The Pittsburgh profession," he writes, "is now sadly overcrowded. There is not a man in this whole community affluent through the practice of medicine. And many of us have to struggle for the necessaries of life. I believe that the American Medical Association, as a matter of duty to the profession, should cause to be published widely, systematically, a bulletin to the effect that the profession *is* overcrowded *everywhere*, and to deter as much as possible further entrance."

The last suggestion of our correspondent reveals the earnestness of his feelings, which are shared by many struggling physicians throughout the country. This question, however, must be mainly settled by the laws of supply and demand.

THE PRESERVATION OF DEAD BODIES FOR DISSECTION AND OTHER PURPOSES.

SOME recent tests of the various methods of preserving bodies for dissection and other purposes, have been made by Surgeon-Major C. Sibthorpe, and reported in the *Indian Medical Gazette.* The experiments were carried on at the Madras Medical College during the winter session of 1882–83. At this place the thermometer in the winter season rarely falls below 63° F., and is often as high as 72° F.; hence dissection has been carried on under great difficulties. But these Mr. Sibthorpe believes he has overcome. The record of his experience is as follows:

Two bodies were injected with alcohol; one of these, fourteen hours after death, underwent putrefaction so fast that it had to be rejected; the other, injected within ten hours, was under dissection for fourteen days, but notwithstanding its being kept in a reservoir of alcohol, the muscles soon lost their color and the tissues shrivelled up.

Three bodies were injected with Wickersheimer's solution, one of these was under dissection thirty-seven days, another fifteen, and the third twenty-two. These bodies had also to be kept in an alcohol bath.

Seven bodies were treated with an injection of boracic acid and glycerine, which was prepared by boiling one ounce of the acid into twenty-four ounces of glycerine; about thirteen pints of this being used in each instance. This solution no doubt preserved the bodies to a certain extent, portions of one being twenty-six days under dissection. In two instances it did not arrest decomposition, and in most cases decomposition set in early in the internal organs.

Finally, by far the most satisfactory results were obtained by following the method first described by Mr. Howse (*Guy's Hospital Reports*, vol. xvii., p. 465).

This consists in injecting a saturated solution of arsenic followed up by the free use of glycerine, which latter Howse considers the preservative fluid, using the former for the purpose of preventing the generation of maggots and fungi.

In making the preparation the glycerine is heated to boiling-point, when it will take up a large quantity of arsenic. One pound to a quart was found sufficient.

About one quart and a half of the solution is first injected, and this injection should be made very soon after death. Then, in twenty-four hours, one or two gallons of glycerine are used to complete the process. Twenty-two bodies, embalmed by this process, continued in a good state of preservation for twenty-seven days, and might have been kept longer. No maggots or flies appeared, no decomposition took place, the muscles preserved their red color, there was but little odor, and no dissecting-wounds occurred. Mr. Sibthorpe believes that by this method dissecting can now be carried on as easily and comfortably in warm as in cold climates. The knowledge of this fact will be appreciated by many of our medical colleges where late spring or early autumn sessions are held.

In this connection we may draw attention to a recent paper by Dr. J. Polak, of Warsaw, who has been studying the same subject. Dr. Polak used first injections of thymol in glycerine and water, as recommended by Virodtsef, then injections of corrosive sublimate dissolved in the same substance.

He found, says the *Lancet*, in commenting on this paper, that thymol, like sublimate, when used in a sufficiently concentrated form, arrests decomposition of the whole body by simple injection of the fluid through the carotid or femoral artery, the corresponding vein being opened. But he also found that even an advanced state of decomposition of the limbs was arrested, and the signs of such decomposition disappeared under the use of injections of sublimate, especially if only spirit and glycerine and no water were used. The skin became mummified and of a dark brown color, and the muscles acquired the appearance of smoked ham under either method, and neither heat nor damp had any deteriorating effect. But a much smaller quantity of the sublimate injection than of the thymol was needed to produce these results. Moreover, the color of the skin was longer preserved, and the comparative cheapness of sublimate renders it, perhaps, preferable. Dr. Polak points out that the injecting syringes should be of glass, owing to the action of sublimate on copper. For ordinary anatomical purposes an aqueous solution—1 in 300 or 1 in 500—is amply sufficient, and is better than chloride of zinc.

A BLESSING IN DISGUISE.

WE have heard it argued in all apparent seriousness that the human race would have been better off had the medical profession never existed. It was contended that, generally speaking, the efforts of the physician are directed toward prolonging the lives of the weak, the decrepit, and the aged, and thus the race as a whole was deteriorated. Were there no physicians the weak and diseased would die, and thus be prevented from transmitting their ills to future generations. But doctors are a necessary evil, and if the hopes of those who look for the perfection of the human race rest upon the extinction of the medical profession, we fear they are doomed to disappointment. Yet they may find consolation in another quarter. *La Higiene para Todos*, of September 1, 1883, contains a notice of a small volume written by a certain Dr. Schwachkopf, upon the benefit to humanity of the cholera. The learned author proves, by the statistics of the disease during the past ten years, that cholera attacks only the weak and infirm, the rachitic, the scrofulous, and all those suffering from ills liable to be transmitted to posterity. Looking at the question from this point of view, he regards cholera as a providential agent by which the strength and vigor of the race is maintained. He therefore agrees with the English authorities, though on somewhat different grounds, in condemning quarantine, the sanitary cordon, and all measures of a like nature. Such measures, he says, are prejudicial to the good of mankind, they hinder the growth of a robust, clean, and healthy race, and in so far prepare the way for the irremediable decadence of nations. "It is to be noted," he continues, "that cholera does not remain in the countries which it visits. As soon as its work of sweeping out the feeble, the wretched, and the dirty is accomplished, it passes on. The disease is endemic in India, and to this fact is to be attributed the strength and vigor of the Hindoos in spite of the misery in which they live." These

views have been disputed by Professor Geistreich, who says that cholera does not attack the debilitated, but, on the contrary, carries off the most vigorous of the race. Notwithstanding the differences of opinion between these learned men, they both agree upon the necessity of keeping the cholera at a distance from the Fatherland. The one fears that the dread disease would carry off the three most noble ruins in Germany, the Emperor William, Von Moltke, and Bismarck; the other is equally solicitous about the safety of these three illustrious personages in the event of a cholera visitation, since he considers them the strongest and most robust individuals in the nation. Our esteemed contemporary of Barcelona wonders greatly at these very original ideas, and seems to have been completely taken in by the ponderous Teutonic joke of Dr. Softhead and Professor Strongmind.

THE INJECTION OF ETHEREAL SOLUTION OF IODOFORM IN FUNGOID SYNOVITIS.

THE treatment of chronic arthritis, and more particularly of fungous joint disease, as at present practised is, to say the least, far from satisfactory to either patient or surgeon. If, as is by no means improbable, fungoid synovitis is but the first local expression of a commencing tuberculosis, the importance of a speedy cure is manifest, even leaving out of consideration the desirability of preserving the integrity of the joint. But to obtain a speedy cure by the methods of treatment at present in vogue is impossible. To those believing in the tubercular nature of these joint affections, their superficial seat offers great temptation to try the effect of local so-called antiseptic remedies. Many substances have been suggested as suitable for injection into the diseased joints, and some of them have been tried with alleged beneficial results. The late Professor Hueter was an enthusiastic advocate of intra-articular injections of carbolic acid, but others who have been led to adopt this method have met with but indifferent success. More recently Mikulicz has proposed the injection of a solution of one part of iodoform to six of sulphuric ether. Acting upon his suggestion, Drs. Neumann and Müller, of Karlsruhe, have treated a number of cases of fungous joint disease by this method, with, upon the whole, rather encouraging results (*Memorabilien*, July 16, 1883). The injections were made at intervals of from four to fourteen days, a Pravaz syringeful being introduced each time. They were exceedingly painful, and this was the chief objection to their use, for though there was some immediate increase of swelling it soon went down again, and an abscess was never seen to result. The treatment must, of course, be begun early in order to obtain the best results. We shall look for further trials of this method with interest, for anything that promises to expedite the tedious and exasperatingly slow cure of chronic joint disease is worthy of earnest consideration. The extremely painful nature of the procedure is certainly a serious disadvantage; but if the method is proved, on further experience, to be of real curative value, this should not militate against its use. It is probable, also, that some means will be devised to obviate this irritant action, or some other solvent of iodoform may be found to be of equal efficacy and at the same time painless.

News of the Week.

NEW YORK INFANT ASYLUM, MOUNT VERNON, N. Y.—It is reported that an epidemic of measles is prevailing at the country home of this institution, and that the mortality is unusually large, sixty deaths having occurred within three months in a household of two hundred and twenty.

YELLOW FEVER.—There were twelve deaths from yellow fever at Havana during the week ended September 22d. During the week ended September 13th there were thirteen deaths from yellow fever at Vera Cruz.

MEXICAN YELLOW FEVER.—It is proposed to establish an inland quarantine at Yuma, Arizona, to prevent the introduction of Mexican yellow fever into the United States. The fever is reported to be spreading rapidly upon the Mexican coast, in the vicinity of Guaymas.

SUICIDE OF PHYSICIANS.—Dr. S. Vander Haydon, of Winfield, L. I., committed suicide on the 15th ult., by shooting himself. Dr. Vander Haydon had recently tendered his services as surgeon to the French Government, asking for an appointment with the army at Tonquin. His application had been accepted.

Dr. R. C. Mullen, of this city, attempted on September 29th to commit suicide by cutting open the right femoral artery. In this, he failed, and he was taken to St. Vincent's Hospital. Dr. Mullen graduated from Edinburgh University in 1850, and practised in Michigan for some time. He had for several weeks shown symptoms of insanity, and had been lodging at station-houses in order to escape his imaginary foes.

ST. FRANCIS HOSPITAL, NEW YORK.—At the recent competitive examination for positions on the house-staff of St. Francis Hospital, New York, the fortunate candidates were Dr. T. Theodore Janeway and Dr. J. V. Kendall.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.—The opening exercises of the seventy-seventh session of this institution took place in the college building, on Monday evening, October 1, 1883, at eight o'clock. The introductory address was delivered by Professor George H. Fox, M.D.

AMERICAN ACADEMY OF MEDICINE.—The American Academy of Medicine will meet in the New York Academy of Medicine, on Tuesday, October 9th (three o'clock), and Wednesday, October 10th. The address, by Dr. H. O. Marcy, of Boston, Mass., President, will be delivered on Tuesday evening, October 9th, at eight o'clock, on "The Recent Advances of Sanitary Science; the Relations of Micro-Organisms to Disease" (illustrated by micro-photographs projected upon the screen). The following papers have been promised for the general meetings: Dr. L. S. Pilcher, of Brooklyn, N. Y., on "The Relations of Medical Journalism to Higher Medical Education in America;" Dr. Traill Green, of Easton, Pa., on "The Imperfection of Technical Studies as a Means of Mental Culture;" Dr. R. S. Sutton, of Pittsburg, Pa., on "Cleanliness in Surgery;" Dr. Benjamin Lee, of Philadelphia, Pa., on "The Value of an Acquaintance with Botany as a Preliminary to the Study of

Medicine;" Dr. Charles McIntire, of Easton, Pa., "Is it Fair? A Study of the Comparative Political Position of the Medical Profession in the United States;" Dr. A. D. Rockwell, of New York, on "The Exact Value of the Electrolytic Method;" Dr. J. Cheston Morris, of Philadelphia, Pa., "The Milk Supply in Large Cities;" Dr. Charles E. Cadwalader, of Philadelphia, Pa., "Considerations upon the Public Provisions for the Care of the Indigent Insane;" Dr. A. D. Rockwell, of New York, "The Late Dr. George M. Beard—A Sketch." Report of the Committee on Laws of Medical Practice in the United States and Canada (Drs. Dunglison and Marcy).

FRENCH REPORTS FROM THE EGYPTIAN CHOLERA COMMISSION.—The French, at the first breaking out of cholera in Egypt, were very furious in denouncing England for having allowed the disease to be carried to Egypt from India.

Recently M. Jules Guérin announced to the Académie de Medécine that he had received reports from the Cholera Commission, in which it was stated very positively that the cholera was not brought from India but arose *de novo* in Egypt.

OBLIGATORY VACCINATION IN FRANCE.—Those interested in public health have achieved a victory in France. M. Jules Ferry, the Minister of Public Instruction, has decided that revaccination shall be made obligatory in all the colleges and lyceums in France.

MEDICAL LIFE-HISTORIES.—We have already referred to the work that Mr. Francis Galton is engaged in, regarding the medical and physical history of individuals. This gentleman has recently announced in the *Fortnightly Review* a plan for obtaining from members of our profession medical genealogies having the special aim of tracing the hereditary character both of mental and bodily qualities. Mr. Galton has already tried the same plan on a large scale among eminent scientific men, with very valuable results. The points on which he wishes information are: race, conditions of life, form and feature, health and disease, vigor, sensation, artistic capacities, intellect, and character. He intends to give £500 in prizes for the best returns, and to publish the conditions of competition in October next. The competition will be open to all medical men. The results of Mr. Galton's plan will be watched with great interest.

DR. BROWN-SÉQUARD is a candidate for the seat in the Académie des Sciences made vacant by the death of M. Cloquet.

INTERNATIONAL MEDICAL CONGRESS AT AMSTERDAM,—At this meeting, held last month, a number of prominent medical men, representing Holland, England, Germany, France, and Scandinavia, were present. The propriety of holding annually an International Medical Congress to deal with hygienic questions specially affecting countries and colonies in the tropical portions of the globe was also mooted.

Sir Joseph Fayrer, whose long experience in British India enabled him to speak with the highest authority, declared that, in his opinion, the colonization of the plains of tropical countries by Europeans would never succeed. After three generations European families always died out. Even in the hilly districts of the tropics it was doubtful whether pure European blood could permanently perpetuate itself. Dr. Lewis stated that the children of English soldiers in India who were brought up in the hills from five thousand to seven thousand feet above the sea-level were always more or less unhealthy and weak in constitution, though if they were sent to Europe in time they might generally lay the foundations of robust health.

At the final general meeting, the question of the foundation of a special school for the training of physicians for the Colonies in tropical countries was discussed. The proposal of Professor Vandencorput for the establishment of an International Association to deal with the problem of epidemics was referred to the Special Committee for further inquiry, with instruction to report the result to the next Congress, which will be held in the Hague twelve months hence. The principal members of this Commission are Professors Vandencorput, De Chaumont, Lewis, Leroy, De Méricourt, and Da Selva Amado.—*Medical Press and Circular.*

THE ENGLISH CHOLERA COMMISSION.—All the members of this commission, except three, have returned to England.

Reviews and Notices.

A COMPLETE HANDBOOK OF TREATMENT. Arranged as an Alphabetical Index of Diseases to Facilitate Reference, and containing nearly One Thousand Formulæ. By WILLIAM AITKEN, M.D. (Edin.), F.R.S., Professor of Pathology in the Army Medical School, Examiner in Medicine for the Military Medical Services of the Queen, etc., etc. 12mo, pp. 444. New York: Bermingham & Co. 1882.

THIS book is a compilation from the last edition of Dr. Aitken's well-known work on "The Science and Practice of Medicine," and comprises the chapters on treatment as written by that author. The diseases are arranged in alphabetical order, with numerous cross references, whereby the reader is enabled to turn at once to any desired subject without being obliged to refer to an index. Under each heading is found a short definition of the disease, and then follows immediately the portion on treatment. Dr. Aitken's work is too well known to require any discussion here. The book before us is printed in clear type, on good paper, and is of a convenient size for handling.

THE TREATMENT OF WOUNDS: ITS PRINCIPLES AND PRACTICE, GENERAL AND SPECIAL. By LEWIS S. PILCHER, A.M., M.D., Member of the New York Surgical Society. With One Hundred and Sixteen Wood Engravings. 8vo, pp. 391. New York: Wm. Wood & Co. 1883.

THIS volume, constituting the number for August in Wood's Library, well sustains the high reputation for excellence which this series of medical books enjoys. The entire subject of the treatment of wounds is discussed in a concise and practical manner, and the lucid explanations in the text are made still more clear by numerous well-executed illustrations. The first part of the work is devoted to a general consideration of wounds and their immediate effects, of the physiology of repair and the character of the influences which are capable of retarding or perverting reparative action. The subject of antisepsis is briefly considered, and the mode of application of the various antiseptic dressings is described in detail. In the second part the author treats of spe-

cial wounds and wounds of special regions, whether traumatic or produced by the knife of the surgeon. In this part the method of application of the general principles, enunciated in the preceding chapters, to particular cases is described. In addition to the table of contents there is a very complete alphabetical index, by which the reader is enabled to refer readily to any subject. The work is eminently practical and thoroughly up with the times, all the latest methods of treatment of assured value being treated of in sufficient detail. Especially is this the case in the chapters on antiseptic treatment, a department in which the German surgeons have been notably active. Here we find collected all the most recent modifications as proposed by different operators, an acquaintance with which was previously to be obtained only by a laborious search through the periodical literature. We cannot but congratulate the readers of the library on securing so valuable a work as this, which in itself is worth a large part of the annual subscription to the series.

THE PRINCIPLES AND PRACTICE OF SURGERY, being a Treatise on Surgical Diseases and Injuries. By D. HAYES AGNEW, M.D., L.L.D., Professor of Surgery in the Medical Department of the University of Pennsylvania. Vol. iii., 8vo, pp. 784. Philadelphia: J. B. Lippincott & Co. 1883.

THIS third volume completes Agnew's Surgery. It is five years ago since the author commenced his task. During that period he has not been idle in his leisure moments. It has evidently been a pleasure to him to write, considering the faithful and earnest manner in which he has striven to get the results of his surgical experience. The work, as a whole, is quite voluminous. While on general principles we might wish it were less so, he has nevertheless given us an interesting, instructive, and exhaustive treatise. We would not undertake to say how he could curtail it, except, perhaps, regarding one or two special subjects. But even these are so admirably presented that we are forced to refrain from criticism. General surgery is supposed to include everything in the shape of operative treatment of every part of the body, and in a comprehensive treatise like the one before us it would probably be a disappointment to many surgeons if the entire range of subjects were not discussed. The author is always practical, and from such a point of view we cannot read too much of him. Besides, he infuses an individuality in his work which is highly commendable. Weighing everything according to the standard of his own experience, he is inclined to be positive and to the point. This gives to his whole work true originality, and makes it proportionately valuable to the student. The third volume partakes of the general character of the others, and is consequently an interesting and instructive one. Although appearing to lack system in its arrangement, we are inclined to believe that the author adopted the present plan of his last volume for the purpose of condensing within reasonable limits all the subjects not previously discussed. But the mere arrangement is of secondary importance to the subject matter. Each of the fourteen chapters is complete in itself, and this is probably all we need to expect under the circumstances. The volume commences with a discussion of the surgical diseases of the larynx and trachea, following in turn with sections on diseases and injuries of the nose and naso-pharyngeal region; diseases and injuries of the eye and appendages; diseases and injuries of the ear; malformations and deformities, including the domain of orthopedy; affections of the muscles, tendons, bursæ, and aponeuroses; surgical affections of the nerves, lymphatic system, skin, and subcutaneous connective tissue; syphilis; tumors; diseases of the mammary glands; electricity in its application to surgical therapeutics; operations for nerve-stretching; and lastly, massage.

Throughout the volume are scattered a large number of illustrations—the majority original—of diseased conditions, surgical apparatus, and surgical instruments. As a whole these are very well drawn and present an artistic appearance. It would be in vain to even enumerate the various divisions of the different chapters, or even the different diseases described. It is much easier to ask one's self the question what is not in the book rather than what is omitted. But the author is enabled to get over so much ground by the admirable manner in which he brings out the salient points of the different diseases and their treatment. Some, for instance, are treated of in a few lines, but the reader is made to feel that this is all he needs. Other subjects are discussed at greater length, but are almost invariably accompanied with the author's idea of what should or should not be done. The rules of practice laid down are eminently safe and are founded on common-sense and large experience. Consequently this volume, with its predecessors, will be abundantly able to stand on its merits, which are of the highest order and which will place every purchaser of the set under lasting obligations to the painstaking and accomplished author. The volumes will take their place beside the most comprehensive, valuable works on surgery in our language, and withal will remain a credit to American surgery.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN, WITH A FORMULARY. By EDWARD ELLIS, M.D., late Senior Physician to the Victoria Hospital for Sick Children; late Physician to the Samaritan Hospital for Women and Children, etc. Fourth edition, revised and enlarged. 8vo, pp. 218. New York: Bermingham & Co. 1882.

THIS is a reprint of the latest edition of Dr. Ellis' work on the "Diseases of Children." As the book is issued at a low price great pains have been taken to economize space. The type is small, the lines are not leaded, and the chapters follow one after the other without any interval. We question whether there is any real economy in such books, for the injury done to the eyes by reading several pages of close print without any resting-places of white more than offsetts the slight reduction in price which such an arrangement permits of.

THE ESSENTIALS OF BANDAGING, WITH DIRECTIONS FOR MANAGING FRACTURES AND DISLOCATIONS; FOR ADMINISTERING ETHER AND CHLOROFORM, AND FOR USING OTHER SURGICAL APPARATUS, and containing a chapter on Surgical Landmarks. Illustrated by 136 engravings on wood. By BERKELEY HILL, M.B. Lond., F.R.C.S., etc., etc. Fifth Edition. Enlarged and Revised. 8vo, pp. xiii., 341. New York: J. H. Vail & Co. 1883.

A WORK which has so pleased the public as to reach a fifth edition may be said to have passed almost beyond the reach of the critic's pen. Besides the essentials of bandaging, additions have been made which now make Mr. Berkeley Hill's book somewhat of a *vade mecum* for the surgical dispensary and surgeon's office. Among the additions to the fifth edition may be mentioned descriptions of laryngoscopy and ophthalmoscopy, accounts of Thomas' splints, Croft's plaster splints, Carr's splints, and various other improvements in practical surgery which cannot fail to be of value to the student.

The explanations of the various bandages and the methods of applying them, illustrated by clear and well-made cuts, the succinct account and rules for the treatment of fractures and dislocations, and the clear description of the surgical landmarks of the body and the useful appendix giving directions for the treatment of hare-lip, cleft palate, tapping, operations for hernia, vesico-vaginal fistula, and various other operations, make the book the most useful work of its kind for the student and country practitioner of which we have any knowledge, while it will prove a valuable addition to the library of the city surgeon.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 24, 1883.

DAVID WEBSTER, M.D., PRESIDENT, IN THE CHAIR.

DR. R. E. SWINBURNE read a paper (see page 373) on

ADENOID VEGETATIONS OF THE PHARYNGEAL VAULT AND THEIR RELATION TO MIDDLE-EAR DISEASE.

DR. JOHN P. GARRISH thought that here, as elsewhere, medical men frequently overlooked general symptoms and treated the throat and nose as though these were independent portions of the body. A frequent local and exciting cause of these troubles in persons predisposed to catarrhal inflammations was smoking cigarettes. The method of treatment which had given him the best results was constitutional, consisting in the use of cod-liver oil, the syrup of the iodide of iron, and iodide of potassium, with attention to the general condition, aided by syringing with some mild astringent or mucilaginous preparation. He had obtained good results from the occasional introduction of a bougie and producing a certain amount of pressure upon the parts affected.

DR. F. H. BOSWORTH said that the more he saw of throat disease, the more he was convinced the proper treatment was not in the use of gargles, or sprays, or washes, but in the employment of such measures as remove the organic changes which are the cause of it. In every case there is organic change in some portion of the upper air-passages which is the source of the entire trouble, and he had operated with far more satisfactory results here than in any other part of the respiratory tract. He had not used the forceps. He had had some very bad results from the use of the forceps. He believed that in the wire snare we have a much more ready and effectual means than in the forceps. Certainly the use of the snare is not necessarily painful, and he never had been obliged to give an anæsthetic, except in very small children. With regard to the galvano-cautery, he had used it in several cases, and his experience differed from that of Dr. Swinburne, who says that its use is not attended by unpleasant results. On the contrary, Dr. B. knew of no instrument more dangerous in the nose than the galvano-cautery; but that it could be used without unnecessarily burning tissues, Dr. B. believed there was no doubt. Certainly its use in the anterior nasal cavity caused pain, and he thought it could not be used at all without creating intense inflammatory reaction.

DR. H. H. CURTIS said he had removed these growths with the forceps, the galvano-cautery, and the finger-nail, and after each of these methods he had seen intense depression follow, like that which occurs not infrequently after amputation of the uvula. For the removal of the flat growths which cannot be removed by the wire snare he resorted to repeated scarifications and spraying the surface with a saturated solution of iodoform in ether. To this he added constitutional treatment, especially iodide of potassium in small doses, sometimes mercurials, and with these measures had obtained his most satisfactory results.

DR. O. D. POMEROY thought that a little too much had been made of these growths since Meyer wrote an article concerning them about ten years ago. They are nothing more than enlarged glands, in nearly all cases the enlargement being due to inflammatory hypertrophy or proliferation. It is not necessary to always remove them, for, like the faucial tonsil, they usually disappear when adult life is reached. So if the existing catarrhal condition can be removed by ordinary treatment by the use of spray, which he still continued to have faith in, he would not remove these growths. Of course, if they became so large as to act like foreign bodies and obstruct nasal respiration, they should be removed.

Occasionally these growths encroach upon the Eustachian tube, and he believed that they are a prolific source of ear trouble. Meyer had referred to one interesting fact, namely, that he succeeded in picking out twenty cases among two thousand school children in which he inferred, from a peculiarly sad facial expression and nasal tones, that there were adenoid vegetations in the vault of the pharynx. When these symptoms present themselves there is no question about the propriety of removing the growths. Whenever they obstruct respiration certainly they should be removed. With regard to the method of removal, he felt a strong prejudice against the galvano-cautery, and it seemed to him that the Jarvis snare was the most efficient means we have. He had not found it necessary to give ether if the child is a large one. Dr. Pomeroy thought the weight of testimony was against removing the growths entirely at one sitting. The reaction is sometimes serious in character, and violent inflammation is often developed, which may extend through the Eustachian tube and produce severe otitis media. Care should be exercised, when removing these growths situated near the Eustachian tube, lest too much tissue be taken away, and a cicatrix form that may obstruct the entrance to this canal. He had used the nitrate of silver probe with good results, but by this method would not remove more than one growth at a time.

DR. O. B. DOUGLAS said that if others could use Dr. Swinburne's instrument as satisfactorily as had the inventor, it certainly would be a boon to the surgeon who attempted the removal of these growths. He wished to direct attention to the reflex disturbances produced by adenoid vegetations in the vault of the pharynx, and related a case in which the entire trouble produced by them was referred to the larynx, and when the growths in the post-nasal region were removed all the symptoms disappeared, and the voice was restored entirely. He thought he might differ, perhaps, with the author of the paper concerning the desirability of removing all the growths at once. At least his experience had been that too much inflammation follows such an operation, and therefore he believed it to be desirable to remove only a portion at one operation.

DR. BOSWORTH wished to protest in the strongest manner possible against the heterodox opinion expressed by Dr. Pomeroy when he says that unless ear trouble is present these growths may be allowed to remain. He wished to say that if these growths are let alone the children will have ear trouble, and that it is a most dangerous condition to allow to remain in a young person. Undoubtedly they will shrivel up, but shall we wait ten or fifteen years for this to occur, while during this time perhaps lasting injury may be done by them? He said, No.

DR. POMEROY said he thought he put in a proviso that if the catarrh is manageable, and the growths are not troublesome, they may be allowed to remain.

DR. BOSWORTH thought that a slight condition of this kind might produce incurable mischief.

DR. HOLCOMBE referred to the former practice of removing tonsils, whereas now only a very few are removed, and the change had been brought about by the observation that hypertrophy of the tonsils can be removed by local applications, and also that there is a tendency for it to disappear of itself after a while. This had led him to conclude that many of these adenoid growths can be removed by local applications, and he had used successfully for that purpose the carbolate of iron, injections of acetic acid into the body of the growths, etc. He accepted this method in preference to excision by any means.

DR. SWINBURNE said, concerning the reaction following the use of the galvano-cautery, that while he did not think it could be used anywhere in the respiratory pas-

sages without producing such reaction, yet inflammatory reaction which had terminated in any serious trouble he had not seen. He thought the forceps was not regarded as the best means of removing these growths *unless the palate can be controlled;* but with the palate, the mouth, and the patient controlled, the entire growth can be easily removed, and at once, with the forceps and without injuring the other parts at all, and he had not seen serious inflammatory reaction follow. The serious inflammatory reaction which others had seen after removal of these growths he believed was due to the method employed, or the manner of employing it, and he thought the objection to their removal at one sitting had no real foundation. He believed that every case should be operated upon, because of the liability to the occurrence of inflammation of the middle ear, caused undoubtedly by the presence of these growths. He believed that not only the ear, but the general health is endangered on account of being obliged to breathe through the mouth. While these growths, if left to nature, will atrophy more or less, perhaps in many cases disappear, yet they have been seen in patients fifty years of age. He had employed general treatment alone, but had not succeeded in curing his patients without resorting to local measures.

Dr. O. B. Douglas exhibited

A NEW HYPODERMIC SYRINGE,

made by Reynders & Co., and so arranged that it can be carried in the pocket with the facility and safety of an ordinary pocket-knife.

The Society then adjourned.

TRI-STATE MEDICAL SOCIETY OF INDIANA, KENTUCKY, AND ILLINOIS.

Ninth Annual Meeting, held in Indianapolis, Ind., September 18, 19, *and* 20, 1883.

(Special Report for The Medical Record.)

The Society met in English's Hall and was called to order by Dr. J. L. Thompson, Chairman of the Committee on Programme. A prayer was offered and was followed by an eloquent address by His Excellency, Albert G. Porter, Governor of Indiana.

Dr. Thompson then introduced the President, Dr. William Porter, of St. Louis, who said that the best reply to the Governor's eloquent address and to the salutation of welcome by the morning press was the three days' work.

THE REPORTS OF OFFICERS AND COMMITTEES

were then heard and accepted. Letters from abroad were then read by the Secretary: one from Dr. Samuel Gross, emphasizing

THE IMPORTANCE OF THE TRAINING OF NURSES FOR TOWNS AND RURAL DISTRICTS,

and one from Dr. L. J. Jones, informing the Convention of the presence of the distinguished military surgeon, Sir William MacCormac, at Niagara Falls. Whereupon an invitation was sent the latter by the meeting, requesting the honor of his presence at the Tri-State Convention.

A CABLEGRAM,

conveying greetings to the Society from Dr. McKenzie, of London, who was present at its last annual meeting, was received.

THE PRESIDENT'S ADDRESS

was deferred to the first evening session. It was replete with practical suggestions in relation to the future prosperous growth of the Society and inquired what better superstructure could be built upon the Tri-State as its foundation walls than the Great Western Medical Association. The address was referred to a committee, who, upon submitting its report, recommended a change of name and an enlargement of the Association's territory. The name suggested by the committee and finally adopted by the Association was

THE MEDICAL SOCIETY OF THE MISSISSIPPI VALLEY.

The name will afford to every mind, American or European, a definiteness of geographical location and territory comprised within the boundaries of the Association.

The territorial limits are marked by great natural boundaries, the Alleghenies and Rockies, the Gulf and the Great Lakes.

THE MANNER OF THE ELECTION OF OFFICERS OF THE ASSOCIATION

was a subject that came up for discussion. Instead of the present incumbents appointing their successors, it was determined that the several members of each State represented should appoint one member to serve upon a committee for the election of officers.

THE OFFICERS ELECTED FOR THE ENSUING YEAR

are as follows: *President*—Dr. B. N. Griffith, of Springfield, Ill.; *Vice-Presidents*—Dr. J. W. Matthews, of Louisville, Ky.; Dr. C. G. Commegys, of Cincinnati, O.; and Dr. J. E. Link, of Terre Haute, Ind.; *Secretary*—Dr. G. W. Burton, of Michell, Ind.; *Chairman of the Committee on Arrangements*—Dr. F. L. Matthews, of Springfield, Ill.; *Chairman of the Committee on Programme*—Dr. C. P. Pearson, of Indianapolis, Ind.

It was decided to hold

THE NEXT MEETING OF THE ASSOCIATION

at Springfield, Ill., within two weeks of the middle of September, 1884, the exact date to be given at an early day.

The names of the Committee on Publication are: Dr. G. W. Burton, of Michell, Ind.; Dr. Wm. D. Byrd, of Quincy, Ill.; and Dr. H. I. Raymond, of Indianapolis, Ind.

The programme presented fifty-three papers for reading and discussion before the Society.

TORTICOLLIS,

by Dr. D. S. Booth, of Sparta, Ill.

The case related was that of a boy, twelve years of age, affected with extreme wry-neck, congenital in kind, not in degree. Subcutaneous tenotomy practised upon the tendons of the sterno-cleido mastoid and trapezius, and upon the deep cervical fascia, brought about an excellent result, and transformed an ugly deformity into the beauty of symmetry.

TREATMENT OF COMPOUND FRACTURES,

by Dr. Ap Morgan Vance, of Louisville, Ky.

Shall compound fractures be treated by the open method, by through drainage, or by occlusion? If the wound is closed can the possible formation of pus be determined before any danger has arisen to the patient? Make use of the thermometer as your guide. High temperature during the first forty-eight hours is not alarming; after the second day it betokens pus-formation. The Doctor's practice was to occlude an ordinary compound fracture, and then, if pus should form, to establish drainage.

Dr. Joseph Eastman, of Indianapolis, said: I agree with the essayist in the belief that compound fractures may often be reduced to simple fractures, but do not think we could depend upon the thermometer at all times. I think with Dr. Thomas that the three great discoveries of medical science within the last century are vaccination, anæsthesia, and the clinical thermometer. My experience corroborates that of Dr. Tait, that in prolonged shock following surgical operations or compound fractures the patient might go down to death without the thermometer hanging out the red lantern signalling danger, but I have never known an instance of profound shock where the pulse did not beat more and

more rapidly until it ceased its pulsations, or until reaction set in. If I resorted to plaster-of-Paris splint for putting up a compound fracture, I should use the Bavarian form, admitting of inspection as often as required.

NERVE-STRETCHING,

by DR. J. B. WRIGHT, of Olney, Ill.

The operation seemed peculiarly adapted to chronic cases.

DR. BYRD thought that the rationale of nerve-stretching in the cure of neuralgias might be explained by the traction made upon the vertebral end, loosening adhesions and removing thickenings, thus allowing that part of the nerve-trunk near the vertebral foramen room for expansion. He laid stress upon the therapeutic value of extreme flexion of the thigh in sciatic neuralgia.

DR. R. E. HAUGHTON, of Indianapolis, based his pathology of neuralgic pain upon impaired nutrition of the nerve, leading to molecular change in its structure.

FRACTURE OF OS FRONTIS OF EIGHTEEN YEARS' STANDING,

by DR. W. S. HAYMOND, of Indianapolis.

The case cited was that of a woman hit in the forehead with a stone. Two months afterward had pain in her head which increased in severity continually. After years of suffering, an abscess opened in the scalp, and on passing a probe into the opening of exit of the pus, the frontal bone imparted to the hand of the surgeon a sensation of roughness. A depressed fragment, rough, necrosed, and suppurating, from injury eighteen years previous to the os frontis, was removed. It consisted partly of the external and partly of the internal table, and measured two by three inches. The neuralgia subsided. The extent of injury, severity of pain, and the duration of the lesion were remarkable.

DR. HOBBS, of Knightstown, related a case in which, owing to a syphilitic necrosis, almost the entire calvarium had to be removed at successive operations.

DR. EASTMAN drew the lesson that the most desperate cases are worth our best efforts, and advocated early use of the trephine in doubtful cases of head injuries with untoward symptoms.

DR. BYRD referred to the use of the trephine in the cure of epilepsy and insanity.

DR. THOMPSON had trephined twice in epilepsy at the time of the war with good results.

DR. G. V. WOOLEN, of Indianapolis, said that Dr. Haymond's results justified the operation. In extreme cases operate. In simple depression without symptoms let it alone; when bad results come, then operate. If epilepsy, suppuration, and neuralgia supervene, then the acute symptoms have passed away and no artery will be found crushed.

DR. JOHN COMINGORE said unless the fracture be compound or comminuted, wait. Do not cut down upon a simple fracture for purpose of diagnosis. In simple fracture with slight depression, the brain may accommodate itself.

MYELITIS DUE TO ARSENICAL POISONING,

by DR. A. W. BRAYTON, of Indianapolis. Recovery after ingestion of one ounce of arsenic.

SYPHILITIC INTERSTITIAL KERATITIS,

by DR. H. M. POST, of St. Louis.

The existence of this disease was established in 1857, by Jonathan Hutchinson. The diagnosis of superficial and interstitial keratitis should be readily differentiated if we look sharply at what is before our eyes and use oblique illumination. In treatment the sheet anchor is mercury, which is also a tonic in inherited syphilis. If iritis set in as a complication, forestall adhesions by dilatation of the pupil.

DR. THOMPSON remarked that at the very inception of interstitial keratitis what resembled a miniature snowflake appeared on the membrane of Desmet. In cases where the tension is plus, use eserine and maybe also a double iridectomy will be required. Atropia, if employed in these instances, may lead to the glaucomatous process.

DR. POST thought that the indications for atropia or eserine, as the case might be, was too fine a point to broach before an association of non-oculists.

DR. THOMPSON gave the rule: If tension is plus use eserine, if minus use atropine. Any one presuming to practise ophthalmology should be able to tell plus, minus, and normal tension.

RESECTION AND AMPUTATION: THEIR RELATIVE VALUE,

by DR. R. E. HAUGHTON. The conditions that decide between amputation and resection are the situation and function of the joint, condition of constitution, and condition and nature of the disease. The author of the paper brought forward statistics to prove that excision was seven times as fatal as amputation in early life. No excision should be made in extremes of age, nor in phthisis, in acute disease, or malignant disease of the articular surfaces. The essayist leaned toward amputation as the rule.

DR. J. E. LINK, of Terre Haute, advocated resection of the elbow-joint, even if half the shaft of the humerus had to be exsected. He declared his belief that preservation of the periosteum has nothing to do with the restoration of bone, except keeping open the cavity until osteal matter forms. In successful transplantation of periosteum, medullary matter has been removed.

Dr. Link also advocated resection at the ankle-joint as preferable to amputation above. As to the knee-joint, he was not quite clear which alternative he should adopt.

DR. EASTMAN said that recent statistics show that resection at the knee-joint is much more favorable than amputation. And why should it not be so, when in amputation so much tissue and the large artery and nerves of the popliteal space have to be severed, whereas in resection, by the use of the curvilinear instead of the H incision, not even the articular arteries need be wounded. In one resection at the knee-joint he had not used a single ligature.

DR. THOMPSON remarked upon the numerous sinuses that are apt to form after resection at the knee. In his army experience amputation at the shoulder did better than resection of that joint; but army statistics, he thought, did not usually go far enough.

DR. FRENCH, of Missouri, thought that the dangers of resections had been magnified, but that due discrimination should be used in the selection of cases.

DR. BYRD counted it his misfortune to have seen so many resections in English hospitals, some for extra-articular trouble! All got well!

DR. COMINGORE leaned in favor of excision of joints at the time of the war, but thought each case must be treated upon its own merits.

DR. HAUGHTON challenged any to refute the statistics of Bryant and MacCormac given in his paper. London surgeons were becoming opposed to resections.

PHYSIOLOGY AND PATHOLOGY OF INSANITY,

by DR. N. FIELD, of Jeffersonville.

The brain was an entity. Its pathology should be simple. Take a common-sense, rational view of any case in court, and do not allow the lawyers to perplex you by their artifices.

Then followed two papers on

SOME MENTAL PROBLEMS IN QUESTIONS OF MEDICAL JURISPRUDENCE,

by DR. C. G. COMMEGYS, of Cincinnati, and

INSANITY,

by DR. HAYS, of Chicago.

Dr. Hays said the negative character of insanity (negation of sanity) should be kept in mind. No verbal definition was possible, because a negation cannot possibly be defined in positive terms. In idiots the proper treat-

ment was the education of the perceptive faculty. Original defective perceptions, *i.e.*, incompleteness of original observation, were the forerunners of dementia. In mania, monomania, and melancholia, delusion was the characteristic faculty, a delusion being a false ideational concept, not a false belief, else, in the religious world, each denomination would consider the other insane. The true criterion of insanity was the retention of a false belief, notwithstanding that sufficient evidence is afforded to show its falsity. Egotism, exalted self-consciousness, is the essence of a lunatic's mania or melancholia.

SPONGE-GRAFTING,

by DR. EDW. BORCK, of St. Louis.

Sponges to be prepared in acid and iodoform. Sponge-grafts one line in thickness, covering the wound. Infrequent removal of dressings. Care for the granulations. Useful in recent railway lacerated wounds as well as in extensive ulcerations.

STONE IN THE BLADDER,

by DR. H. H. MUDD, of St. Louis.

The aim of the paper was to determine the extent of dilatability of the bladder compatible with safety, *i.e.*, its non-rupture. Capacity is desirable for a large quantity of water in litholapaxy. The dilatability of the bladder-walls was found to be very great.

THE ANTIPYRETIC TREATMENT OF TYPHOID FEVER,

by DR. G. C. SMYTHE, of Greencastle.

Death may result from specific lesions of the disease, as intestinal hemorrhage or peritonitis from perforation. But the percentage of mortality from such causes is quite insignificant when compared with the mortality of typhoid from hyperpyrexia and the degenerations following. Excessive heat production and faulty heat elimination, one or the other factor, will be found, and should be combated by antipyretic treatment. Cold water by effusion or baths, or in some form of external application, with quinine in dose of twenty-five to fifty grains each alternate night so as to cause marked morning remissions, constituted the treatment strongly advocated in the first days of the fever.

DISEASES OF THE FALLOPIAN TUBE, WITH TAIT'S OPERATION AS A MEANS OF CURE,

by DR. THOMAS HARVEY, of Indianapolis.

Symptomatology and etiology obscure in the early stages. One of the most marked symptoms was the occurrence of intermenstrual pain, usually on a certain fixed day. Dr. Harvey was of the belief that this symptom of intermenstrual pain was caused by a stenosis of the tube or other obstruction to the passage of the ovule along the oviduct. The escape at intervals of a limpid or purulent fluid from the uterus, and the ability to pass a uterine probe into the dilated Fallopian tube afford a diagnostic symptom and sign that cannot be readily mistaken in their significance.

The author cited a case of tubal disease that had been diagnosticated by different surgeons as hip-joint disease, spinal curvature, ulcer of stomach, and hepatic colic, and the unfortunate patient had successively been cupped, bled, blistered, and made to wear a plaster-of-Paris jacket. An exploratory incision revealed ovarian disease, the ovary being brought into view through a small abdominal incision by elevating the uterus through the vagina.

Dr. Harvey sought to show that Tait's operation should not be resorted to until other means had failed to make a cure in disease of the Fallopian tubes. He had frequently injected a sixty-grain solution of silver nitrate into the dilated tube with good effects.

DR. J. R. SUTCLIFFE, of Indianapolis, related a case of death after intra-uterine injection of copperas, upon which he was called to make a post-mortem, which revealed the injected fluid in the peritoneal sac.

DR. HAYMOND related a similar case from white-oak bark injection.

DR. HARVEY declared the cause of death in such cases to be shock, and not peritonitis or septicæmia.

CHLOROFORM IN LABOR,

by DR. G. V. WOOLEN, of Indianapolis.

The indications for chloroform were found in its effects upon the nervous system, relieving pain and shock; upon the muscular system, bringing about relaxation; and upon the secretory system, stimulating the secretions. This paper was discussed at length, and brought out the following points, viz., dangers of chloroform in labor, degree of anæsthesia compatible with safety, and mode of administration.

DR. HARVEY would not go beyond the second stage of anæsthesia, which sufficed to allay pain and effect relaxation. The third stage of anæsthesia arrests labor. The chloroform should be dropped upon a handkerchief by an attendant and administered by the patient herself, and that too only during a contraction.

DR. JOHN CHAMBERS, of Indianapolis, called attention to the numerous instances of death from chloroform, chronicled in the London *Lancet* during the past ten years. It was too generally the received opinion among the profession that authentic cases of death from chloroform in the lying-in chamber were exceedingly rare.

Dr. Chambers in his obstetric practice frequently employed ether, as a safer anæsthetic than chloroform, fulfilling the indications nearly as well as chloroform, and at the same time making it more difficult to plunge the patient into that state of dangerous anæsthesia, known as the third stage.

NOTES ON TRACHEOTOMY,

by DR. WILLIAM H. MYERS, of Fort Wayne, Ind.

The burden of the paper was that tracheotomy should not be regarded as a *dernier ressort*. With Trousseau, the essayist thought that it was as obligatory to perform timely tracheotomy as to tie the carotid artery when cut.

DR. EASTMAN also advocated early operation in cases of foreign body in the larynx, and related the case of a child with lodgement of a foreign body in its trachea, on whom he urged an operation before daylight, but was put off through the remonstrances of the parents, who deferred the operation till eight o'clock in the morning.

The child being raised from its bed in the morning by the nurse, the foreign body rolled into its larynx and caused fatal obstruction.

DR. L. J. JONES, of Chicago, presented a very practical paper upon

ERRORS OF REFRACTION AND DEFECTS OF ACCOMMODATION,

urging their correction and early relief by glasses prescribed by a scientific oculist and optician.

DR. WILLIAM BYRD, of Quincy, Ill., exhibited a

HUTCHINSON'S INHALER,

with which he had been using an anæsthetic compounded of bromide of ethyl, one part; chloroform, three parts; and alcohol, four parts. Had used it in 78 cases, without giving rise to vomiting, retching, or any untoward symptom; and had consumed but two and one-half pounds of the anæsthetic, the cases comprising many capital and tedious operations.

THE LAST AFTERNOON SESSION

was held in the beautifully decorated hall of the State Insane Institution, upon invitation of the superintendent, Dr. W. B. Fletcher. After the meeting a visit to the wards of the Institution was made by the members of the Society.

THE PARISIANS CONSUME ten thousand horses and four hundred mules annually. The excuse is that horse-flesh is good, cheap, and free from disease.

Correspondence.

OUR LONDON LETTER.

(From our Own Correspondent.)

THE MEDICAL HOLIDAY—HEALTH RESORTS—DEATH OF DR. BERTIER FILS—THE APPROACHING WINTER SESSION—COLD AND WARM WINTER RESORTS—STUDENTS NUMBERS—INTERNATIONAL CONGRESS OF ANTI-VACCINATIONISTS.

LONDON, September 24, 1883.

LONDON still exhibits a dearth of doctors, though it must be confessed that this statement is to be received *cum grano;* just as the more common assertion that "nobody is in town" is sometimes modified by the cynical addendum "except three and a half millions of people." These millions are all sufficiently cared for by a rather overstocked profession, and it is only the well-to-do and the consultants who have left their patients to the care of their less fortunate brethren or have followed them to their holiday resorts. Our wealthy patients are, indeed, scattered far and wide, and the majority will not return for weeks. Many of them have gone to drink the waters at the fashionable spas, and books on those "cures" are the chief representatives of medical literature. Thus Dr. Despres has issued a medical guide to Contrexéville, which is noted for its effects on the urinary organs, and, if we are to believe this local authority, may sometimes obviate the necessity of lithotrity or the more dreaded cutting. Dr. Vintras, a French physician practising in London, has published a guide to all the spas of France, which is ably compiled and well got up. A work of much wider scope and of a more scientific nature is the "Mineral Waters of Europe," the joint introduction of Professor Tichborne, the well-known Dublin analyst, and Dr. Prosser James, of the London Hospital and the Throat Hospital. This physician also published lately a fifth edition of a small monograph on "Vichy and Its Therapeutical Resources," which first appeared nearly twenty years ago. Dr. Blanc has brought out a little book in English on "Aix-les-Bains," a most popular spa, which has just been patronized by our Princess Beatrice. Last year the younger Dr. Bertier, of Aix, published an English medical guide to this resort which was well received, and just as I was occupied with this letter comes the sad news of his untimely decease. He will be greatly missed by many English invalids who frequented Aix-les-Bains. He was a native of the place, but he spoke English fluently, and understood English medicine and English ways. After taking his degree in Paris his father, who still practises at Aix, sent him to this country to acquire our language and prolong his medical studies. He then began practise in his native town and speedily acquired a considerable position, his geniality and kindness, together with his talents, making him a favorite. This season the Princess Beatrice being sent to Aix by her advisers here for some rheumatic symptoms, was placed under poor Bertier's care. A day or two after his royal patient left he was taken ill with febrile symptoms. These soon developed into typhoid, and now I hear of his death, at the age of thirty-seven. *Sic transit gloria.*

Though our dead season is not over there are many signs that the next session is at hand. The medical schools are freely advertising their arrangements for opening on October 1st, and no doubt most of the introductory lecturers for the occasion have well advanced with the preparation of their addresses. It is a grand opportunity of speaking to the public. What a pity these gentlemen do not meet and agree together to send forth a loud, united protest against the manner in which medical legislation is burked, or an indignant remonstrance respecting professional grievances.

Another sign of the times is the appearance of books or pamphlets on winter climates. As the summer resorts close those for winter open, and already people are preparing to follow the swallows, while a few are as ready to seek the quiet but cold air of high mountain valleys. The climatic treatment of consumption might have been expected to receive less attention during the war of the bacillus; but at present the fight does not penetrate far beyond professional circles, and invalids who have basked in the sunshine of Egypt or the Riviera often long for the South as soon as autumn's clouds set in.

A further notice of the coming session is forced upon medical readers by the simultaneous issue of "Students' numbers" of all the journals. Not that they seem to be valued by students, for they only consist of the "regulations" of the examining bodies and a few paragraphs of trite advice. These numbers are, in truth, mere baits for advertisers; these paid-for announcements make up the bulk of the bulkiest issue for the year, a veritable *farago libelli* as uninteresting as it is useless. Take a single item in proof of this, one of them gives students a few words about books, enumerating among those to be read on one subject more than would be found in a diligent physician's library.

International movements have invaded medical affairs, as witness the brilliant congresses at Philadelphia and London. We have also had parodies of these in the form of an "anti-vaccination congress," and the third of these strange gatherings has been summoned to be held at Berne. Many will regret to see that the fanatics of this movement have the support of Mr. Herbert Spencer. Philosophers in this nineteenth century seem curiously constituted. There will of course be an M.P. or two present, but they do not count for much. Then the ex-professor, F. W. Newman, is a supporter, but this quondam teacher of Latin has long ceased to possess any real authority, and seems to seek popularity in all sorts of unorthodox assemblies of pseudo-scientific pretensions. His book on the "Phases of Faith" attracted attention and turned not a few youths into the muddy stream of scepticism, but it was by no means scientific or even philosophical. Of course the coming "Congress" opens, not for inquiry but to advocate the prejudices of the insignificant minority who make up the "vaccino-phobiacs," as they have been called. Such an assembly may therefore vote its foregone conclusions in complete security that it cannot attract much notice from the scientific world. I see no "delegate" from America in the list which I have received. May we conclude that the people of the States are too well educated to favor the fanatics?

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 22 to September 29, 1883.

DE LOFFRE, A. A., Captain and Assistant Surgeon. Assigned to duty at Fort Niagara, N. Y. S. O. 182, par. 5, Department of the East, September 27, 1883.

HAVARD, VALERY, Captain and Assistant Surgeon. Assigned to temporary duty at post of San Antonio, Texas. S. O. 120, par. 10, Department of Texas, September 21, 1883.

REED, WALTER, Captain and Assistant Surgeon. Relieved from duty at Fort Omaha, Neb., and assigned to duty as Post Surgeon, Fort Sidney, Neb. S. O. 103, par. 5, Department of the Platte, September 22, 1883.

SHANNON, W. C., Captain and Assistant Surgeon. Assigned to duty at Fort Bridger, Wyoming. S. O. 102, par. 3, Department of the Platte, September 19, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Warren, Mass. S. O. 181, par. 3, Department of the East, September 25, 1883.

CARTER, W. F., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Washington Barracks, D. C. S. O. 182, par. 5, Department of the East, September 27, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Relieved from further duty at Creedmoor, N. Y., to return to his proper station, Fort Adams, R. I. S. O. 180, par. 1, Department of the East, September 24, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for extension of two months. S. O. 49, par. 1, Military Division of the Atlantic, September 25, 1883.

WAKEMAN, WILLIAM J., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Sidney, Neb., to rejoin his proper station at Fort D. A. Russell, Wyoming. S. O. 103, par. 5, Department of the Platte, September 22, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 2, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 25, 1883.....	0	84	29	7	4	17	0	0
October 2, 1883.....	0	86	26	2	11	41	0	0
Deaths.								
September 25, 1883.....	0	12	2	5	2	12	0	0
October 2, 1883.....	0	11	8	3	4	16	0	0

THE SOCIAL PURITY ALLIANCE.—As the college terms are now beginning and the medical student is abroad, we can print with propriety, the following interesting notice from the *Students' Journal*. Says the editor: "I have just made a discovery, which I am sure will interest many readers, which is that a society exists in connection with University College which the promoters hope will have a very important effect in extinguishing what is termed the 'Social Evil.' The society is termed the 'Social Purity Alliance,' the members of which pledge themselves, if unmarried, to abstain from the gratification of the animal passions. There is certainly, unless my observations have misled me, an extensive field for the operations of such a society as this among medical students. Many medical students act, when they enter upon hospital practice, as if the acquirement of the knowledge of good and evil was part and parcel of their professional education, and the results of their investigations are often very terrible and destructive. While wishing the 'Social Purity Alliance' success, I fear that the operations of the society will not have much effect upon the morals of medical or any other students, although the meetings of the society have been better attended than the promoters could have expected."

MEDICAL DEPARTMENT OF THE NEW YORK LIFE INSURANCE COMPANY.—Dr. Henry Tuck has been appointed Senior Medical Director of the New York Life Insurance Company, in place of Dr. Charles Wright, recently deceased. Dr. Abel Huntington has been appointed Junior Medical Director, as successor to Dr. Tuck. Dr. Buchanan Burr has been appointed Dr. Huntington's successor, as City Examiner.

THE SUMMER CORPS OF PHYSICIANS AND THEIR WORK.—From the report of Dr. E. H. Janes, Assistant Sanitary Superintendent, on the work of the summer corps, it is seen that the entire amount of work done during the two months of service is equivalent to visiting 43,915 houses, 198,932 families, and 6,601 cases of sickness. This includes not only tenement houses, but all classes of dwellings occupied by the very poor. Some visited once and others several times each. A great many of the cases treated were of a very mild type, needing but a single prescription, as is shown by the small number of deaths occurring, 28 in all, of which 10 were of cholera infantum, 4 of diarrhœa, 1 of dysentery, 2 of gastro-enteritis, 2 of diphtheria, 1 of scarlet fever, 5 of measles, 2 of phthisis, and 1 of marasmus. Besides caring for the sick, they distributed 17,542 circulars containing brief instructions on the care and feeding of infants, and the management of sun-stroke, and 3,293 free excursion tickets for the floating hospital of St. John's Guild. These excursions are regarded as an excellent auxiliary to the efforts of the Board of Health.

IMPURITIES AND ORGANISMS IN THE AIR OF THE COMPRESSED-AIR CHAMBER.—Dr. J. Solis Cohen, of Philadelphia, writes: "THE RECORD of September 22d has an abstract, p. 335, on 'Impurities and Organisms in the Air of the Compressed Air-Chamber.' The writer seems to have overlooked the fact that sterilization of the air for the condenser must be superfluous so long as the air remains unsterilized in the consulting-room, in the patient's apartments, and everywhere else where he breathes."

TARDY ACTION OF PILOCARPIN?—Dr. F. W. Ellis, of New Richmond, Wis., writes, that on January 10th he gave a boy, aged three years, suffering from ascites, a course of pilocarpin, covering two days. From the 11th to the 16th there was no effect. On the night of the 16th a fly-blister was applied. On the 17th all the characteristic symptoms of jaborandi appeared; profuse sweating and salivation, so that the circumference of the abdomen diminished two inches.

A CASE OF CONGENITAL AND HEREDITARY GOITRE.—Dr. G. S. Chalmers, of Alton, Ill., sends us the following unique history. He writes: "A few days ago I was called to a lady in labor and in due course she was delivered of a large boy. There was nothing remarkable in the progress of delivery, except that when labor had progressed well into the last stage, things almost stood still with the head firmly wedged in the lower strait. Imagine my surprise to see a well-developed goitre on the child's neck. The swelling came clean up under the lobes of the ears and with quite an enlargement over the windpipe. The enlargement felt moderately firm, as if from simple enlargement. The child seemed cyanotic at first, and had to be encouraged by cold water dashes and manipulation before it commenced breathing. And then it was fully an hour before the color got natural. As the cord beat quite actively I did not cut it for fifteen minutes. After this we soon found that if the head was kept fully extended breathing progressed naturally, but if the head became flexed, breathing became irregular, and the face cyanotic. It is now doing well, six days after delivery, and is a vigorous feeder. The mother is exophthalmotic with quite an enlarged neck, and noticeably prominent eyeballs. I have never seen a case recorded of congenital goitre. What can be done for a case like this?"

THE LATE DR. BEVERLY LIVINGSTON, OF NEW YORK. —*Whereas*, The Medical Board of the Nursery and Child's Hospital, receives with deep sorrow the announcement of the death of Dr. Beverly Livingston, at the beginning of what promised to be an association of unusual usefulness to the institution;

Resolved, That we, his associates, hold in greatest esteem our remembrance of the life and character of our

friend, and desire to record our appreciation of his high attainments and skill as a physician, coming as they did from an ardent devotion to his selected life work, and our knowledge of his noble and elevated mind, and of his generous companionship.

Resolved, That we see in the melancholy event of his death that our institution, the profession, and the community are deprived of the influence and example of a pure, true, and earnest life.

Resolved, That we tender to the family of our late associate our heartfelt sympathy in their great bereavement; and that these resolutions be published in the medical journals of the city.

GEORGE G. WHEELOCK, M.D.,
EDWARD L. PARTRIDGE, M.D.,
Committee.

THE RELATION OF DIPHTHERIA TO CONTAMINATED DRINKING-WATER.—Richard Cole Newton, Assistant Surgeon, United States Army, writes: "*The Sanitary Engineer*, for July 26, 1883, contains the following paragraph (page 177): 'In a recent monthly report of the Connecticut State Board of Health, mention is made of a family in Thompsonville where there were eight cases of diphtheria with two deaths. This family lived in a house with a small back yard containing the well and privy as usual, but in addition a deposit of filth a foot thick on a level, composed of putrefying vegetable waste and a mongrel mass of nastiness. The ground sloped to the well and the deposit of filth came close to it. The windows of the bed-rooms opened on this yard. The family that moved out had been afflicted with malignant scarlet fever with several deaths. In quite a number of (other) instances there were from four to six cases in one family, or oftener all the members, and in all that have been carefully studied some sufficient cause has been found.' This quotation contains an almost exact description of two establishments in the vicinity of this post. One is known as the Post Dairy and the other the Butcher Pen, although fortunately neither place is now used for the purpose indicated by its name. They are both about two miles away, and in each the well was sunk in the position most advantageous to receive the drainage of two large and very filthy corrals (cattle yards). The contamination of the water from these wells was so marked that it offended sight, smell, and taste, and yet, because it was cooler than the water from a creek, which flowed near, the well water was generally drunk by the people of both houses. At the dairy there lived a widow with four small children, and two or three servants, one of whom, a young woman, had a child of four years. About six weeks ago, the oldest child of the proprietor was seized with diphtheria, which in succession attacked the entire family of children. Three died, and one (the first attacked) recovered. The child of the servant did not contract the disease, although it constantly played with the others and lived under the same conditions, except that its mother would never allow it to drink the well water, which the others drank freely. At the Butcher Pen, a man, his wife and two children, one eleven years and one eighteen months old lived. The father was generally away at work. The mother and older child had 'chills,' and four weeks ago the baby, which was still sucking, developed a case of diphtheria, which went on like the other cases, but on the fifth day began to improve, and gradually recovered. Although between two and three weeks have elapsed since the convalescence of the last case was established, no further cases have shown themselves. There was not, so far as I can learn, any exposure to diphtheria on the part of those who suffered from it. Indeed their isolated position rendered such a thing quite improbable. No child in the post has developed any diphtheritic symptoms. The 'police' (cleanliness) of this fort, however, is the special pride of its officers. As to the treatment, the two cases that recovered received less treatment than those that died. Two of the cases were under my sole care. One, the only son of the widow, and her especial pride, received every care that could be bestowed upon him. I followed, as far as possible, the treatment which I understand Professor A. Jacobi adopts in diphtheria, including the lime-water spray, which certainly did this good, that there was no fetor about the case, which had been very marked in the preceding ones, where no spray was used. This case did not die from strangulation (because the child both spoke and swallowed just before death), but from heart failure, whereas both of the other children, if the mother's account can be relied upon, died entirely from 'want of breath.' In the boy's case stimulation and frequent feeding with beef-tea and milk were crowded from the first. The child at the Butcher Pen was ordered a piece of bacon about the throat, to be worn constantly. Throat to be swabbed every hour with a solution of iron and chlorate of potash, and three-fourths of a grain of quinine to be given in solution every two hours. On the fifth day an almost confluent pustular eruption (which resembled a confluent variola at end of first week) appeared all over the throat and parotid regions. The next day an abundant rash, like scarlatina, showed itself all over the body. The fauces and tonsils now began to look better. The ulcers on the latter were smaller and less sloughy, and the case went on to recovery. I should add that the treatment was inaugurated by a few small doses of gray powder and ipecac and one or two doses of castor oil. This, with the medication already mentioned, comprised the entire therapy in the case. I should have attached more importance to the rash spoken of, if it were not a usual thing on all children, sick and well, during our long and hot summers. It is gratifying to note that the well on the dairy premises has been filled up and the house torn down, and our post commander is endeavoring to have the same good work accomplished on the other premises, although unfortunately he has no direct control over them."

SOME "CURES" FOR HYSTERIA.—A writer in the feuilleton of *L' Union Médicale* discourses in an entertaining and instructive manner upon the course and cure of hysteria. "One is always instructed," says the writer, "in travelling. It is also a pleasure to observe for one's self the productions of the soil, the manners of the natives, the color of their umbrellas, and the price of their clothing. But how much more lively is the satisfaction when the chances of travel put us in possession of some precious novelty in the direct line of our researches and habitual occupations! This is what has happened to me. I have made a capital discovery in therapeutics, and I do not hesitate to announce it at once for the benefit of humanity, and without taking any of the preliminary risk of submitting it to the Academic committee on secret remedies. On a recent trip, I came across one of my old patients, whom, for convenience sake, I beg to introduce as Madame Lerond. We had not parted on very good terms, at which you will not be astonished when you learn that she is a respectable shopkeeper, of forty years, who suffered from hysteria of the vaporous form, with luxuriant manifestations as regards the head, stomach, intestines, limbs, and of all the organs and functions of the body generally. Not only had I failed to relieve Mme. Lerond from her various discomforts, but a cloud had marked the end of our mutual relations. *Voici comment:* One day she asked me seriously to tell her frankly, for the sake of her children, whether she was not threatened with insanity, and whether she would really ever be well. After explaining that her symptoms were only those of a nervous debility, etc., etc., I concluded: 'In fine, Madame, without ever being very sick, you will always be a little *patraque*.' I was much pleased with this expression, which seemed to hit her case very exactly. But my patient did not see the matter in the same light, and with a very cold air she told me that the word *patraque* seemed

to her very impolite, and she was not used to being treated in such a way. I tried in vain to explain that Littré defined the word patraque as signifying familiarly a person who was weak and invalidish, and that it was frequently used in the best society. These arguments failed to excuse my *soi-disant* enormity, my patient being equally unfamiliar with Littré and the best society. I departed, resolved thereafter not to essay expressions with my patients unless I was sure they would be comprehended.

Meeting Mme. Lerond on my travels, however, a year later, I ventured to approach and inquire after her health. She replied, in a very radiant and satisfied manner, that she was completely cured. 'I congratulate you,' said I; 'may I inquire how you secured this happy result?' 'It was a Russian physician who came to the store last winter, and desired, with much solicitude, to treat me. After having examined me very carefully, he assured me that he understood my case exactly, but he could not cure me at once, as he would have to send to Russia for the remedy. He had no confidence in French pharmacists, but by sending to Russia he would be absolutely sure of the purity of the medicine. The remedy having arrived, I took at first one pill. Next day the doctor came to inquire about its effects. It had not acted well. He then directed me to take two a day for four or five days. I felt myself instantly relieved, and since then have had neither headaches, nor insomnia, nor bad digestion, nor weakness.' The story was told with the greatest confidence and satisfaction. 'Do you know,' said I, 'Mme. Lerond, of what this famous remedy consists which has done you so much good?' 'I know very well, but I have forgotten. It was a yellow and bitter—it was—it was—rhubarb!' It was indeed rhubarb that had cured my old patient of all her ills; but the rhubarb came from Russia, and was given by a Russian physician. French rhubarb, given by a French physician, would never have done it."

The above account reminds the writer of some other "cures" for hysteria: "One of the best agents against the gastric and vaporous forms of hysteria is champagne, but only on the express condition that it be taken in a cup, not in a glass. I still see a former hysteric, who passed a dozen years of her life a victim of her nerves, eating each day but three pieces of barley-bread, and desolating her family with her *bizarreries*. In her case it was not a Russian physician, but a *religieuse*, who brought about her cure, by simply announcing that she would die if she continued. She did not continue. Another case had been for four years the despair of all her acquaintance. She swung through the whole circle of physical perversions. The mode of her cure was neither rare nor curious, for it was simply through the care of a homœopathic doctor, of whom she still sings the praises, and who deserves credit for this trait of sagacity—that he specified, in commencing her treatment, that it would not last less than an entire year. This was, in fact, the most powerful and most suitable globule which the homœopath used in the whole course of the treatment. And so on *ad infinitum*. An excellent formula against hysteria would be, I think, the following:

℞. Diplôme de Philadelphie,
Rhubarbe de Russie,
Fumisterie,
Homœopathie, āā q.s.
M.—Gild the pill."

A New Journal.—The question whether Philadelphia or New York, Boston or Chicago, is the real medical centre, has been easily and simply decided in favor of the first-named city by the establishment therein of a new medical journal, *The Medical World*. We assert this, because the *World* is not an ordinary ephemeris, and its scheme of organization could not have been evolved from anything short of a real medical metropolis. The *World* has introduced the chromo-era into medical journalism, and offers four portraits of eminent medical men yearly to its subscribers. The first four eminent gentlemen are rumored to be already in Philadelphia sitting for their pictures. The second four, it is expected, will soon be on their way, and we know not how soon it will be before Philadelphia is crowded with eminent gentlemen demanding lithographic recognition in the pages of our esteemed contemporary. That the appearance of the *World* is a subtle device on the part of Philadelphia to entice the leaders of our profession into its midst can hardly be doubted.

Colotomy in France.—Colotomy, says the correspondent of the *Medical Press and Circular*, is an operation very rare in France, as the French surgeons have considered it a dangerous and useless operation. M. Pollaillon brought a case under the notice of the Academy. The subject was twenty-one years of age, who had a hernia on the left side since infancy. Two years ago the hernia became irreducible, and a neuralgia of the testicle of the same side, which was attributed to the weight of the tumor. No bandage could be borne under these circumstances. M. Pollaillon attempted the radical cure with an entire success. M. Guérin criticised the operation of M. Pollaillon, which, according to him, was not equal to his own, which he practised over forty years ago, and which consisted in practising a series of subcutaneous wounds; the exudation resulting formed a cicatricial tissue which completely obstructed the canal and thus effected the radical cure of hernia.

Preparing for Scientific Work at the Next Meeting of the New York State Medical Society.—We have received a circular letter, which we print below, from Dr. Hutchins, President of the State Medical Society. It contains an appeal to the members and delegates of the State Society to supply scientific material for the next meeting. We can heartily commend the President's effort in this direction. The circular reads as follows: "The By-Laws of the State Society provide that to the Business Committee are left all the arrangements for its scientific work. The Business Committee is not appointed till the opening of the session, so that all the control it has over this work is to receive any papers that may be offered, appoint the hour when they may be read, and apportion the time to be consumed in the reading. No authority, under the By-Laws, is given to the President, or to any Committee, to secure the presentation of any scientific matter. The By-Laws tacitly assume that such material will be offered. Whatever efforts the President may make, to assure an interesting and instructive session, are solely on his own motion, and the disposal of all papers thus secured is at the discretion of the Business Committee. The President strongly desires that the session of 1884 may be entertaining and profitable to the large number of medical men who will gather at the capital from all parts of the State in midwinter, and to this end this circular is addressed to all the delegates and members of the State Society, asking their personal interest in providing a suitable programme for the meeting. It adds materially to the general interest if all parts of the State are represented, as thereby are called out the most diversified experiences. The session of the Society is so short that the attractiveness of the programme is enhanced if the papers are short, or an abstract thereof prepared for reading. By this means a larger number of topics can be presented, and a fuller discussion permitted. It is hoped that this appeal may be seriously entertained by the delegates and members, and special preparation be made for the next meeting, worthy of so distinguished a body, representing such important interests. The President desires that titles of papers, with names and addresses of authors, may be forwarded to him at the earliest convenience. A list of these, in the order of their reception, will be prepared and laid before the Business Committee at the opening of the session. This will enable the Committee to consult the convenience of authors as to the time of reading, and contribute to the easy and full presentation of the Society's work."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 15 NEW YORK, OCTOBER 13, 1883 Whole No. 675

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Original Articles.

CASES IN ABDOMINAL SURGERY,

WITH CONSIDERATIONS AS TO THE CAUSES OF DEATH.

BY CHARLES K. BRIDDON, M.D.,

SURGEON TO THE PRESBYTERIAN HOSPITAL, NEW YORK.

THE following group of cases have come under my observation during the past few months, and I have thought them of sufficient interest to present to the readers of THE MEDICAL RECORD.

CASE I.—*Double ovariotomy, without adhesions; death in ninety-five and a half hours.*—Mrs. S. G——, aged 45, married nineteen years, sterile; began to menstruate when twelve years old; has always been regular until the last year, during which the intermenstrual period has been sometimes three, on other occasions five and six weeks; the quantity has never been in excess. A year ago she began to be annoyed with a sensation of cold, covering an area of about two inches in diameter, situate about the middle of the front of the right thigh. In a few months this spot began to be surrounded by a halo of heat, and then began to be the seat of pain which radiated up and down the thigh; lately the same sensations have existed on the opposite limb. She began to grow stout after marriage, and two years ago was a woman of massive proportions, weighing about two hundred and fifteen pounds. Since then her abdomen increased considerably in size, but she was persuaded it was the accumulation of fat common to some women at the change of life. She never experienced anything unusual until December, 1882, when she had an attack of colicky pain in the right inguinal region that passed along in the direction of the colon; it only lasted a few hours, and when examined by her medical attendant he told her she had a tumor.

December 12th.—Patient is a stout, healthy looking woman, her face looks full and bright, and certainly does not indicate the existence of serious trouble. Her pulse, probably accelerated by my presence, is 92; respiration, 20; temperature, 99°. The abdomen is distended by a tumor that nearly fills the cavity; it is most prominent in front, is everywhere dull on percussion, save a space of about three inches between the superior limit of the tumor and the sternum, and laterally behind; the surface of the swelling is perfectly smooth, tense, and elastic, non-fluctuant, or I should rather say that the thick abdominal walls render the sense of fluctuation obscure and uncertain. The configuration is that of an ovarian or uterine tumor; it fills the abdominal cavity so completely that it does not rise and fall with the ascent and descent of the diaphragm; there is no crepitation. From sternum to umbilicus, 7 inches; from umbilicus to pubis, 10 inches; circumference at umbilicus, 48 inches; three inches below it measures the same. It is difficult to measure from the anterior superior spines, on account of the superimposed fat, but as well as I can ascertain, it is the same on both sides from those points to the umbilicus, namely, 10½ inches. It was with difficulty I could reach the os, which was thrown backward, and I could not map out the body, but made out that it was anteverted.

Examinations of the renal secretion gave the following results:

February 12th, night: specific gravity, 1.028; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.020; reaction acid; no albumen.

February 13th, night: specific gravity, 1.028; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.026; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts.

February 14th, night: specific gravity, 1.032; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts. Morning: specific gravity, 1.025; reaction acid; no albumen; amorphous urates; bladder epithelium; no casts.

February 14th, 8.30 P.M., to 15th, 8.30 P.M. (24 hours), passed a little less than a quart.

February 15th, 8.30 P.M., to 16th, 8.30 P.M. (24 hours), passed a pint and a half.

February 16th, 8.30 P.M., to 17th, 8.30 P.M. (24 hours), passed a little over pint and a half.

March 11th.—Patient complains of being distressed for breath. Circumference at umbilicus, 49 inches, three inches below it is 50 inches. It is impossible to find the xiphoid cartilage or the anterior superior spines, but the measurements are conjectured to be as before; there is at least two inches of abdominal fat that obscures the sense of fluctuation. It was only with difficulty I could draw the os forward, and I found it impossible to introduce the sound. I aspirated the tumor and withdrew about four ounces of fluid of the color and consistence of golden syrup; specific gravity, 1.014; alkaline; it coagulated on boiling, and the coagulation was dissolved by boiling with twice its volume of acetic acid (paralbumen). Under the microscope were found epithelial scales and plenty of large granular corpuscles. She was advised to keep her bowels regular with compound licorice powder, and take Buffalo lithia water.

March 28th.—Under the use of lithia the amount of urine has increased fifty per cent.

April 1st.—Has experienced some pain in the course of the left sciatic nerve, and a disagreeable sense of pressure in the rectum. Regarding the diminution in the renal secretion as due to pressure, and thinking that if permitted to continue it might compromise the results of an operation, early interference was advised, and it was contemplated to do it one week after the next menstrual period. Circumstances rendered it necessary to defer it a month longer; twenty-four hours before the day arranged for her to enter the hospital a case of erysipelas was found in one of the wards of the surgical pavilion, and it was determined not to admit her until all traces of this were got rid off.

Patient was admitted to the Presbyterian Hospital, May 5, 1883. A spacious room (4,500 cubic feet) in the admi[illegible]ation building that had never been used, was p[illegible] six weeks before her admission, by painting w[illegible]g, and floors; it was well lighted from the [illegible] and east, had apparatus for steam heating, and [illegible] open fireplace. A most thorough quarantine was established, bedsteads, bedding, etc., were new; nothing was permitted to come in contact with the patient that had been used in the Hospital Department. She was directed to have a warm bath every night, and to have her bowels regulated by compound licorice powder. Examination of urine for the three days after admission gave the following average: daily amount secreted 26

ounces; specific gravity, 1.025; reaction acid; no albumen or casts.

May 8th.—Had a light early breakfast, no lunch, an enema at 2 P.M. Preparations for operation as follows: No one was admitted to the room who had been engaged with any case of contagious or infectious disease; a reliable spray of pure phenol was used; all instruments; thoroughly cleansed and disinfected, were immersed in one to twenty solution; ligatures of silk had been boiled in one to twenty; fifteen large flat sponges had been thoroughly prepared by cleansing from sand and fat, and had been kept in one to twenty solutions for six weeks; temperature of room was between 75° and 80°.

Operation, 3 P.M.—Under the influence of ether it was possible to make a more satisfactory diagnosis. The tumor was found more movable, it could be lifted bodily upward, and the hands could be insinuated between its lower surface and the pubes. The uterus was found to the left and separate from the tumor; crepitus was also plainly elicited on moving the abdominal walls over the tumor; fluctuation was doubtful. An incision was made in the mesial line, commencing about two inches below the umbilicus and passing downward about six and a half inches. There was at least two inches and a half of fat in the superficial fascia; another layer of fat was found after division of the muscular aponeurosis—this of course was seated in the subserous connective tissue, and was very vascular. After the ligation of all bleeding points, the peritoneum was opened, exposing the cyst; this was found entirely free, there was not a single adhesion. Its walls were punctured with Spencer Wells' trocar, and after the evacuation of the largest cyst several smaller ones were treated in the same manner. The contents were so viscid as to occupy some time in removal, and when it was so reduced in size as to permit it, it was drawn through the opening in the abdominal walls, which were promptly closed, and maintained in coaptation by my friend, Dr. Watts, who assisted me. The pedicle was transfixed and tied on either side with a stout silk ligature, and supplemented by a second encircling the pedicle immediately below the first; the cyst was severed a quarter of an inch above the ligature. This large multilocular cyst was situate in the left ovary. The right was found to be undergoing the same process of degeneration; it was occupied by three cysts, united, about the size of a small orange: its pedicle was surrounded by a ligature and it also was removed. The two weighed with their contents sixteen and three-fourths pounds. The abdominal opening was then closed carefully with carbolized silk sutures, one-third of an inch apart, each suture taking up half an inch of peritoneum. The needles for introducing these sutures were made so that the punctures were no larger than necessary for the passage of the silk, and during their introduction the abdominal cavity was protected from the spray and blood from needle-punctures by a large flat sponge wrung out of warm carbolized solution. The toilet of the peritoneum was made as complete as possible, in fact it was left free of everything, and almost dry. The line of incision was covered with a strip of wet gauze protective, eight layers of freshly carbolized gauze and macintosh, the whole supplemented by a nicely fitting flannel bandage. The patient was placed in bed surrounded with hot bottles, and her head enveloped in a comforter. The House Surgeon, Dr. Freeman, was directed to let her sip hot water if she had any vomiting, and to give her occasional doses of tr. opii deodorata if she had any pain.

May 9th.—She vomited two or three times during the night; thinks the feeling of nausea was diminished by sipping hot water; had some pain, which required the administration of opium; it has now ceased; fifteen ounces of urine removed by catheter during the past twenty-four hours; temperature has reached 100°.

May 10th.—Was much disturbed during the night by a very heavy thunder-storm. Complains of feeling faint, of some abdominal pain and a constricted feeling, as of a band drawn tightly round the hips; her temperature went up one degree during the night, pulse 104. Noon today she began to vomit, and the matters ejected soon assumed the features characteristic of peritonitis. Metal refrigerating coil was applied to the head; tube was introduced into the rectum to facilitate the escape of flatus, and she was put upon aconite and opium. Toward evening hypodermic injections of bimeconate of morphia were substituted for the internal use of opium, and she was directed to be fed upon peptonized milk and Leube's solution of beef.

May 11th.—She slept greater part of the night. Vomiting ceased after the use of the bimeconate of morphia. Only twelve ounces of urine have been drawn during the past twenty-four hours, and it contained a trace of albumen. There is considerable meteorismus, everywhere resonant; no dulness, no fluctuation; pupils contracted, face flushed, pulse in the morning 100, went up toward evening as high as 120, respirations ranged between 13 and 18, temperature ran up to 102°. Toward night she began to perspire; the vomiting returned. Hypodermics of Magendie were ordered every four hours, and twenty grains of quinine per rectum. At midnight she was in a condition of stupor, respirations sighing and rapid.

May 12th, 3 A.M.—Pulse, 140; respirations, 24; temperature, 105°. Extremities becoming cold, hypodermics of brandy were given, but she gradually sank, regurgitating a thick, green, glairy fluid occasionally, and died at half-past three.

It is much to be regretted that an autopsy was not obtained in this case, as there are some conditions in the clinical history that could only have been cleared up by such an investigation.

I will now relate the history of a case of penetrating wound of the abdomen that was exposed to many of the influences that such pains were taken to exclude in the last case, and that did well in spite of them.

CASE II.—Report condensed from a history furnished me by Dr. H. B. McCarroll, House Surgeon. J. P——, native of Ireland, car-driver, twenty-seven years of age, single, was admitted to the Presbyterian Hospital, Sunday, May 27, 1883. Late the previous night, when engaged in a drunken brawl, he was stabbed in the belly. Excited by drink, he did not recognize the fact that he was wounded, and continued his debauch until midnight. On awaking in the morning he found something protruding from a wound in his belly, and his friends brought him to the hospital, twelve hours after the injury. His condition when seen by the attending surgeon (Dr. Briddon) was as follows: A large, strong, muscular man, he lay on his back with his legs drawn up; his face was ruddy, suffused from the effects of drink; his pulse full and strong, 72; respiration, 20; temperature, 100°. He makes no complaint of pain. On uncovering his abdomen a large mass of omentum was found protruding from a small punctured wound situate a little above and external to the centre of Poupart's ligament, its appearance somewhat changed by the length of time it had been prolapsed; its surface was sticky from effusion of lymph; it was ruddy red in color, and opalescent; it did not look as if it had suffered from strangulation, but only from exposure.

Treatment.—It was transfixed with a ligature of carbolized silk, which was tied on either side. It was then cut away, and after slightly enlarging the wound, the stump was returned into the abdominal cavity, which was closed with carbolized silk sutures. Small doses of deodorized tincture of opium were ordered to keep him quiet, and no other precautions were taken.

June 2d.—A case of erysipelas was found in a bed on the opposite side of the ward, which was at once removed from the building and placed in a hut used for the reception of such cases. The patient with abdominal wound was also removed into another ward.

June 4th.—A second case of erysipelas developed in

the ward into which the patient was moved, and at a distance of seventy-five feet from his bed. This case was also quarantined, and our patient was moved back into his old ward, which had been emptied and disinfected. On the third day his temperature reached 101°; the following day it receded to 100°. His pulse never exceeded 92; in fact he did not have a single bad symptom, local or general.

The sutures were removed on the sixth day, and the patient was discharged cured on June 29th. He might safely have been sent out earlier, but it was feared he might strain the cicatrix if he was permitted to go out before it was quite firm.

Suppurating adherent cysts; double ovariotomy; septicæmia; chronic diffuse nephritis; death in ninety-six hours.—Reported by H. B. McCarroll, M.D. Mrs. L——, the patient, was admitted to the Presbyterian Hospital August 4, 1883. She is forty-four years of age, married, but has had no children. She enjoyed remarkably good health until thirty years of age, at which time she weighed one hundred and seventy pounds. Menstruation began at fifteen, and her periods were regular until fifteen years ago, at which time she was told she had anteversion of the uterus, which interfered with micturition and was accompanied by cessation of the menses and the occurrence of delirium and intense pelvic pain at the time when the menstrual periods ought to have appeared. Some months later the uterus was replaced, and all the symptoms abated and finally ceased. Patient was then quite well, with regular menstruation, until three years ago, when the periods became irregular, and one year ago finally ceased. Eight months ago she first noticed a tumor of considerable size in the right iliac fossa. It grew rapidly and attained its present size in a few months.

Examination.—Patient's general condition is poor. She complains of severe pain referred to the right lumbar region, at times extending across the back and down the left thigh. There is slight œdema of the left leg, frequent severe pains in the lower portion of the rectum, especially during defecation, and at times there is a discharge of blood from the bowels. Temperature, 99°; pulse, 108. Urine: specific gravity, 1.020; acid; no albumen; quantity per diem, thirty ounces.

Physical examination revealed the presence of three abdominal tumors; the two larger were situate on either side of the median line, separated by a well-marked sulcus; they filled the iliac fossa, reaching about two inches above the umbilical line; the third was smaller, more tense and resisting, and was situate behind the larger one on the right side; it bulged the lumbar region. The tumors were distinctly fluctuant, but the larger ones were immovably fixed, the hands could not be insinuated beneath them, and they did not move during inspiration and expiration, crepitation could be made out laterally and above. Uterus anteverted and jammed down in the pelvis. The following measurements were taken: from ensiform cartilage to umbilicus, 7 inches; from ensiform cartilage to os pubis, 13 inches; right anterior superior spine of ilium to umbilicus, 6½ inches; left anterior spine of ilium to umbilicus, 6½ inches; circular measurement at umbilicus, 35 inches; circular measurement two inches below, 35½ inches. A hypodermic needle was inserted in the tumors occupying the right and left lumbar regions and the fluid withdrawn from each contained a number of pus-cells, large and small. For three consecutive days preceding the operation an examination of the urine was made night and morning, with the following results:

First day, morning: specific gravity, 1.015; alkaline in reaction; no albumen; the microscope revealed squamous epithelium present. Evening: specific gravity, 1.018; alkaline; no albumen; contained triple phosphates, uric acid, and urates.

Second day, morning: specific gravity, 1.013; alkaline; no albumen; contains some mucus. Evening: specific gravity, 1.016; alkaline; no albumen.

Third day, morning: specific gravity, 1.020; acid; a trace of albumen; pus-cells, uric acid, and squamous epithelium present. Evening: specific gravity, 1.020; acid; no albumen; contains few pus-cells and squamous epithelium.

Operation.—Performed by Dr. Charles K. Briddon, September 27, 1883, at 3 P.M. Patient under the influence of ether. An incision five inches in length was made in the median line and between the umbilicus and the pubis, when the subserous areolar tissue was exposed, all bleeding vessels were secured and the peritoneum was opened to the extent of the wound. It was then found that the omentum was drawn down in a fan-shaped process, adherent by its apex to the lower portion of the front of the cyst. Outside the lateral limits of the omentum, the cyst was adherent to the abdominal walls by bands that yielded readily to the pressure of the hand. The omentum was tied in two places and divided between. It was then found that more formidable adhesions existed below, and the worst of these existed in the true pelvis. The larger cyst was now pierced with a trocar, and when nearly empty of its viscid purulent contents and while it was being drawn through the opening in the abdominal walls, it was accidentally ruptured. In spite of the prompt application of large flat sponges, there is no doubt that some of the fluid entered the cavity of the peritoneum. The next step was to separate the adhesions situated in the cavity of the pelvis. These were most extensive in the very bottom of the cul-de-sac. They yielded without any great force, but the hemorrhage was very free and was arrested temporarily by sponges, and the pedicle of the larger cyst, which was found on the left side, was transfixed with ivory needles charged with strong, closely twisted carbolized silk, and the mass was then removed. Attention was then directed to a second tumor, composed of several smaller cysts, involving the right ovary; the largest of these, about the size of a child's head, was reduced by tapping and the pedicle was secured as on the left side. The sponges were now removed from the cavity of the pelvis and there was found quite free hemorrhage from these points deep down in the very bottom of the cavity. It was very difficult to control this; the instant a sponge was removed a pool of blood obscured three points from which it issued, and when, after several unsuccessful efforts, the points were secured it was found equally difficult to pass and secure ligatures over the points of the forceps; in fact it was only done after turning the patient on her side opposite a window, which very much facilitated the manipulations. A thorough washing of the cavity was then made; it was several times filled with a hot solution of carbolic acid, and when completely cleansed, the abdominal wound was closed with carbolized silk sutures, a large glass drainage-tube being secured in the lower angle. The abdomen was covered with borated cotton secured in position by adhesive straps. Cyst and contents, independent of what was lost, weighed nine pounds.

September 28th.—Morning: Temperature, 101°; pulse, 144; respiration, 22. Urine: specific gravity, 1.022; alkaline; no albumen. Patient rested comfortably during the night. The following method for washing out the cavity was devised: A long rubber drainage-tube was introduced through the glass tube, one end of which rested in the cavity while to the other end was attached a small funnel. The cavity was then thoroughly cleansed with a solution of boracic acid (gr. xvj. to ℥j. of water) and the fluid was returned on the principle of the syphon. After cleansing the cavity thoroughly the drainage-tube was removed and in its place was substituted another, with a piece of lampwick running through its entire length. By this means thorough drainage could be obtained. Patient was ordered a diet of milk, mild stimulation, and opium in sufficient quantities to allay pain. Evening: Temperature, 103.5°; pulse, 140; respiration, 32. Patient

somewhat restless, and complains of great thirst. No abdominal symptoms present. Urine: specific gravity, 1.022; acid; no albumen; amount passed, 28 ounces.

September 29th.—Morning: Temperature, 101°; pulse, 148; respiration, 28. Foul odor about the dressing; this was removed and the cavity thoroughly cleansed. Urine: specific gravity, 1.022; no albumen; acid in reaction; urates, triple phosphates, and squamous epithelium present. Evening: Temperature, 103.1°; pulse, 144; respiration, 28. Urine contains a trace of albumen; few pus-cells.

September 30th.—Morning: Temperature, 101.6°; pulse, 160; respiration, 28. Complains of a slight pain in right iliac fossa. Evening: Temperature, 105.6°; pulse, 160; respiration, 28.

October 1st.—This A.M., for the first time, casts were found in the urine; specific gravity, 1.020; acid; contains albumen, hyaline and granular casts. 2.15 P.M.: Passed into a comatose condition and died.

The following report of the pathological appearances has been furnished by the Pathologist of the Hospital, Dr. T. E. Satterthwaite: The tumors sent for examination, two in number, measured, the larger thirty centimetres in its greatest diameter, the smaller eleven centimetres in its greatest diameter. The larger contained 3,000 c.c. of a thick, tenacious, yellowish-brown fluid. The larger cyst had a thick fibrous wall, the interior of which was studded with papillary growths, the size varying from a robin's to a hen's egg. The smaller tumor appeared on examination, without opening, to be similar in character to the large one, and was multilocular. The fluid removed from these tumors prior to operation contained numerous pus-corpuscles, red blood-corpuscles, also the large granular corpuscles of "Glüge," and many cylindrical elements. The specific gravity of the fluid could not well be determined by the urinometer, on account of the density and tenacity. The fluids were tested for the various kinds of albumen, but owing to the great amount of pus no accurate conclusions could be reached. The fluid removed at the time of the operation presented the same microscopic appearances as the fluid removed before, except the cylindrical elements, which were absent. The fluid removed at the necropsy was less purulent than that examined before, but contained more blood.

Necropsy.—By William H. Reslin, M.D., Curator, twenty-nine hours after death. Body thin. Wound of operation in good condition. Thoracic cavity: Contents normal. Abdominal cavity: When the abdomen was opened no evidence of recent peritonitis was present. The wound of the operation had united, except at the lower extremity, where the drainage-tube was introduced. The peritoneum in the region of, and over the line of incision retained the glistening appearance of a normal serous membrane. The pelvic cavity contained about thirty cubic centimetres of bloody serum, but no evidence of recent peritonitis. There was, however, some thickening of the peritoneum, apparently chronic in character. The stumps from which the tumors had been removed were in good condition. Liver and spleen normal. The kidneys were slightly enlarged; weight, 155 grammes; capsules thickened and adherent, underlying renal surface granular; cut surface, pale; cortex slightly thickened. Microscopically the epithelia was found to be involved by granular and fatty degeneration; there was also a slight increase in the inter-tubular tissue. Chronic diffuse nephritis.

Remarks.—What circumstance or combination of circumstances might be regarded as responsible for the result in the first case of ovariotomy I have not been able satisfactorily to determine. Previous to the operation the patient might have been regarded as in the possession of perfect health, though it is true she was disabled by the bulk of the tumor and suffered much from its pressure effects. At the operation no adhesions were found. A minimum of injury was inflicted on the parts involved. A short incision might have sufficed but for the thickness of the abdominal walls. There was not a single complication, unless the implication of both ovaries might be considered as one. Every recognized precaution against the known causes of death in such cases was strictly enforced to the minutest detail, and yet the patient died. Up to within the last few years it was considered prudent by many experienced operators to put off the operation until the sufferings of the patient demanded interference. Many reasons were assigned for such delay: it was considered that the emaciation consequent upon protracted disease was favorable to recovery; that the repeated attacks of peritonitis to which such patients are exposed destroyed the anatomical characters of the serous sac and its ability to resent traumatism by the usual process of inflammation. It is true that we do see many cases recover after very protracted and necessarily severe operations, the severance of almost universal adhesions, the use of almost numberless ligatures, the cautery, rude handling, and long exposure of the sac. We see such cases progress favorably to convalescence with scarce a change in pulse or temperature, and when we see a case where the conditions all unite to warrant a favorable issue turn out badly, we naturally seek for the cause, and it will probably be by the careful analysis of individual cases that we shall eventually make out many of the causes of disaster. Delay is no longer considered as proper in cases of abdominal tumor. In addition to the suffering it entails, mental and physical, it exposes the patient to many of the accidents which belong to such cases, rupture of the sac, and the very various pathological changes, inflammation, suppuration, gangrene, and twisting of the pedicle, any of which conditions may render an operation imperative at a time or under circumstances that may jeopardize the result. The best authorities recommend an operation as soon as the condition calling for it is recognized.

Objection has been made to the performance of such operations in a general hospital. Such objections have been made by specialists, generally by gentlemen connected with institutions set apart for the treatment of diseases of women. I certainly would not sanction placing a woman who has been subjected to an abdominal section in a ward filled with cases of acute surgery; but if isolation is possible, and all modern precautions are taken, I can see no objection that would not equally apply to cases of strangulated hernia or penetrating wounds of the abdominal cavity, some of which, with protrusion of the viscera, resemble the conditions met with in the operation of ovariotomy, for instance, those in which masses of omentum have to be ligated and returned, and yet these cases do well. Are not the patients in special hospitals exposed to the same evils that exist in general hospitals? The wards in which patients have died of the common consequences of the operation, be those consequences simply inflammation or those more dreaded of infectious or contagious character, are again occupied by the same class of cases. Doubtless every precaution in the shape of disinfection is enforced, but this does not relieve them of the odium that attaches to the former. In my anxiety to avoid any preventable mischief in this case I put off the operation for a month on account of the presence of a case of erysipelas in an adjoining building; and yet, within a period of a few weeks, the second case related was admitted and exposed to the very influences I had so much dreaded in the first case. The man had been stabbed the night before his admission; his omentum had been protruded many hours; it was ligated and excised, and the stump was returned with no other precaution than the use of carbolized silk ligatures and sutures. A few days after a case of erysipelas was found within twelve feet of this patient; he was removed to another ward, where a second case of erysipelas was found. And yet, notwithstanding these exposures, he had an uninterrupted recovery; in fact, he had not a single untoward symptom.

It is the more to be regretted that we were not able to

obtain an autopsy in the fatal case, inasmuch as I have a lingering suspicion that the condition of the kidneys would have helped to explain the result. T. Spencer Wells, in the last edition of his work "On Ovarian and Uterine Tumors," refers to the influence exercised by functional disturbances of those organs on the results of the abdominal section. He expresses his opinion that in cases where the secretion is scanty the operation is apt to be followed by fatal suppression. In another place he says: "One condition which certainly requires correction before the operation is undertaken, is that common one where only a small quantity of highly concentrated urine depositing mixed urates in abundance is passed. If ovariotomy is performed on a patient in this condition, a serious amount of kidney congestion, with symptoms almost amounting to uræmic fever, is almost certain to follow the operation."

Lawson Tait, in his essay on "Diseases of the Ovaries," says: "Especial care must be taken to examine the condition of the urine, for the state both of kidneys and bladder is a most important factor in the success of the operation."

Vogel has calculated that a healthy adult ought to excrete per hour one cubic centimetre of urine for each kilogramme of weight of his body. The patient's weight, without the tumor, was about one hundred kilogrammes, and her average excretion ought to have been one hundred cubic centimetres per hour, and on referring to the history it will be found that it was very much below. The consequence of such a condition would be the accumulation of excrementitious material in the blood, and among the results of such contamination we find a tendency to inflammatory affections. Such were the opinions of Osborne and Traube, and their views have been corroborated by a host of other observers. Erysipelatous inflammations of the skin, purulent infiltrations in the pleural cavities, in the pericardium, less frequently in the peritoneum, and the localization of the inflammation may be determined by the condition of the part involved. In the case reported I was in doubt at first whether the symptoms on the third day were due to uræmia or peritonitis, but twenty-four hours' observation cleared up the doubt.

The condition of the kidneys, revealed in the autopsy of the last case, was sufficient to account for death. The scanty secretion of urine during the time she was under observation aroused suspicion, and repeated careful analyses were made, with negative results—facts unfortunately of too frequent occurrence.

Relief of Internal Strangulation by Alternate Hot and Cold Applications.—A man, forty-two years of age, who had some years previously suffered from a severe attack of peritonitis, was suddenly seized with violent colic. There was meteorism, the abdomen was generally tender on palpation, but more especially at a point a little to the right of the umbilicus. There was no passage either of fecal matter or of gas from the bowel, and purgatives, whether administered by the mouth or the rectum, brought no relief. The obstruction of the bowels continued several days, despite an active and varied treatment, stercoraceous vomiting set in and the patient was rapidly sinking. At this time, all other measures having been tried in vain, Dr. Roux (*Lyon Médical*, September 9, 1883) determined to try the effect of the alternate application of heat and cold to the abdomen. An ice-bladder was first applied and retained for an hour, then it was removed and compresses as hot as could be borne were placed over the abdomen. These applications were continued every hour through the day and night. In the evening some gas escaped from the bowel, and the following morning there was a slight stool. A mild purgative was now given and was soon followed by a copious evacuation, and the patient speedily recovered.

THE PLACE OF PANCREATIN IN THERAPEUTICS.

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The great importance attached to the nutrition of the sick, in modern medicine, has naturally and very reasonably led to the administration of digestive ferments to aid in the preliminary act of digestion, and also to the adoption of many devices for conforming alimentary substances to the impaired digestive functions, which attend all acute and most chronic diseases. This impulse has been so potent as to force the pendulum of medical opinion and practice far beyond the point of equilibrium, and which at the present time seems to oscillate between the extremes of scepticism on the one hand and an easy credulity on the other. The rôle which pancreatin is now playing in this important field of therapeutics, the wide range of its digestive activities, and the extraordinary attention which has been directed to its use by the late Lumleian lectures by Dr. Roberts, are sufficient reasons for inquiring into its proper use. It is by no means uncommon for men even of genius and learning, who have been fortunate or wise enough to make a step forward in the treatment of disease or the amelioration of human maladies, to be carried by their enthusiasm and the exaltation which attends success to attribute to their discoveries or improvements an extent of application which subsequent observation shows to be unwarranted.

This remark is well illustrated in the title given by Corvisart to the first pamphlet issued by him on the use of pepsine, "Dyspepsie et Consomption." The very great control over the processes of digestion and nutrition which his discovery of the use of pepsin afforded, impressed him with the belief that its influence would be sufficient to arrest the ravages of consumption.

The question to be discussed in this paper is not as to the relative value of different digestive ferments, but, admitting the value of all, to determine what is the rational and effective mode of using pancreatin. The proposition submitted, and an attempt to prove which will be made, is, that pancreatin cannot be effectively or usefully administered by the stomach, but can only be employed for modifying foods before they are taken. The argument will be presented in relation to the anatomical, physiological, and experimental aspects of the subject.

When we examine the anatomical arrangement of the alimentary canal, and the order in which the digestive ferments are delivered to and brought into contact with the ingested food, we are struck with this peculiarity, that they are generated and delivered at points remote from each other. Comparatively recent demonstrations have shown that the pancreatic fluid possesses three distinct ferments, viz., amylolytic, proteolytic, and emulsifying. Now it would seem to be a fair deduction and sound reasoning to conclude that if the pancreatic fluid could effectively perform these several offices upon crude food, then the salivary and gastric secretions were useless and in excess of any want of the system. But their presence is proof of their necessity, and the existence of ferments lower down in the elementary canal, supplementary to them, is proof that their action is preliminary, and the fact that their offices are performed where the next lower ferment cannot reach them is proof of their incompatibility. So much may be concluded by *a priori* reasoning from the anatomical arrangement. The physiological aspect of the case will be found in harmony with and confirmatory of the above. The gastric juice is not only known to be acid, but its ferment, pepsin, is inert in any other than an acid medium, while the pancreatic fluid is alkaline and is inactive in any other vehicle. This one physiological fact is sufficient to show that the two ferments cannot act together. One other physiological fact goes to establish the same conclusion, that is, the destruction of the pepsin in the duodenum by the action of the bile. Herman ("Elements of Human Physiology," p. 174),

speaking of intestinal digestion, says: "Solution of albuminous bodies is effected, most probably, by the pancreatic juices, as the activity of the gastric juice which reaches the intestine is destroyed by the bile." Dr. Lucien Corvisart, speaking of the pancreatic digestion (*Braithwaite*, No. xxxix.), says: "When the gastric and pancreatic juices are separated they act in succession, and thus the peptone may be doubled; but when mixed, the action of each is checked—they neutralize each other. Nature prevents this conflict, first, by separating the two juices by the pylorus; second, by the bile, which destroys the pepsin, as shown by Poppenheim." Certainly the demonstrated fact that the activity of the pepsin is arrested in the duodenum, not only by the alkalinity of its fluids, but by the direct agency of the bile, is fairly conclusive evidence of the incompatibility of the two agents which meet these. But the question still remains, Can pancreatin *pass through the stomach*, come out unimpaired, and in the duodenum take up its office and play the same rôle as freshly secreted pancreatic juice? In other words, can pancreatin be usefully employed by administration by the mouth?

The extensive use of remedies in which pepsin and pancreatin are combined, implies a belief on the part of many physicians that pancreatin *can survive* the action of the gastric juice and pass on unharmed into the duodenum, where it is free to perform its office. So far from this being the case, however, there are many reasons for believing that pancreatin is digested in the stomach like any other proteid. Lehman says, "the principal constituent of the pancreatic juice is a substance resembling albumen or casein." Herman ("Elements of Human Physiology," p. 142) says: "Its specific constituents are several albuminous bodies, which are scarcely distinguishable from albumen itself, and to which many observers ascribe the ferment action" (pancreatin). Now it is difficult to understand why a substance of the nature of albumen or casein should not be digested by pepsin, whose sole object and use is to digest albuminoids, and whose ability to digest that whole range of substances is well known. But the determination of this point does not rest upon inference. It has been shown by Kühne that "pepsin in acid solution actually destroys trypsin (one of the constituents of pancreatin); trypsin in alkaline solution does not possess the converse power of destroying pepsin, which, however, is altogether inactive in an alkaline fluid."[1]

Mr. E. Scheffer, of Louisville, Ky., has demonstrated, by careful experiments, the fact that pancreatin digested with pepsin loses its activity in respect to all its properties. From a number of experiments, ingeniously contrived for the purpose of demonstrating this, want of space will permit quoting only two: First, "To a solution of one-half grain of pepsin, in two ounces of acidulated water, was added two ounces of pancreas liquid, obtained by rubbing down and beating three ounces of chopped pancreas with small quantities of water until after three strainings four ounces of liquid were obtained, which readily saccharified starch at the temperature of the air. The pepsin solution containing the pancreas liquid, after four hours' digestion, was filtered, neutralized, digested with starch-paste, and tested, but no sugar action was obtained." Second, "To two ounces of pancreas extraction was added a solution of one-fourth grain of pepsin in two drachms of water, acidulated with five drops of hydrochloric acid, and the mixture treated as described before. Neither from the acid nor from the neutralized solution, after digestion with starch-paste, did I obtain any sign of sugar by Trommer's test; while the pancreas extraction, by itself, treated with starch, had given the most copious precipitate of oxidulated copper."

To the same effect are the following experiments, made by Dr. William Roberts, of Manchester, England,[1] for the express purpose of determining the question under discussion:

"I prepared a solution of lactic acid corresponding in saturating power to the normal gastric acid (2 per 1,000 HCl). To fifty cubic centimetres of this dilute lactic acid I added five cubic centimetres of a solution of pepsin, and five cubic centimetres of an active extract of pancreas. I prepared a second similar, but substituted filtered saliva for the pancreatic extract. The mixtures were then placed in the warm chamber for one hour. At the end of this period the solutions were exactly neutralized and tested, they were both found to be absolutely inert, not a vestige of amylolytic nor proteolytic power had escaped destruction.

"I had an opportunity of testing the same question in a still more satisfactory way. While I was examining the throat of a patient suffering from an ailment which did not affect his general health, a portion of the contents of the stomach was ejected, and fortunately caught in a clean vessel. This was immediately filtered, and about ten cubic centimetres of clear acid solution was obtained. The period of digestion was three hours after breakfast. One-half of this was devoted to testing its saturating power. It was found to possess an acidity very nearly corresponding with that of normal chyme. To the remaining portion five drops of extract of pancreas and five drops of filtered saliva were added, and the mixture placed in the warm chamber for one hour, at the end of that time it was exactly neutralized and divided into equal portions. One portion was tested with a drop of starch mucilage and found to be absolutely devoid of amylolytic power. The other portion was added to an equal volume of milk rendered slighly alkaline with carbonate of soda, and was then placed in the warm chamber. Not the slightest digestive action was produced on the milk in twelve hours.

"With this evidence before me, I am unable to accept the conclusions of Defresne and others in Paris, who allege that saliva and pancreatic preparations can resist the normal acidity of the stomach in full digestion, and who recommend the administration by the mouth of pancreatic preparations during the period of chymification."

It appears then that the evidence afforded by the anatomical distribution of the digestive fluids, by the physiological constitution of these juices, as well as the conditions under which they perform their functions, and the results of experimental inquiry, all point to the conclusion that pancreatin not only cannot act in the presence of the gastric juice, but is deprived, by gastric digestion, of all power to perform its functions.

There remains one more aspect of the question to be considered, viz., Can pancreatic preparations by any device be protected from the action of the gastric juice in their passage through the stomach, in such manner as to preserve their digestive potency intact until they arrive in the duodenum, where the conditions are favorable for their action?

Dr. Fothergill proposes to accomplish this by administering ten or fifteen grains of bicarbonate of soda with a dose of liquor pancreaticus at "the tail of the digestive act." "This passes it securely through the stomach; just as a guard of soldiers sees a merchant convoyed over an unsettled frontier infested by robbers." Theoretically considered this expedient is open to several objections.

First, the alkali and the liquor pancreaticus are commingled, hence the pancreaticus is as much exposed to the attack as the alkali; as if the soldiers who were sent to guard a company of merchants should mix indiscriminately with their unarmed charge, an attack upon this promiscuous assembly would be as likely to prove damaging to the guarded as to the guards. If the alkali could be made in some way to surround the pancreatin, so that the acid gastric juice could be neutralized before the pancreatin became exposed, more certainty would attend the device.

[1] Lumleian Lectures, page 36.

Second, it must not be forgotten that ingesta of no kind pass directly through the stomach. It is the nature and office of the stomach to retain its contents, and to pour out gastric juice upon them. Under these circumstances how long would ten or fifteen grains of alkali resist the acid of the stomach? It is proposed to give the alkali and pancreatin an hour and a half or two hours after the ingestion of a meal, at "the tail of the digestive act." Does not the digestive act continue from four to six hours? Can "the tail of the digestive act" be determined? Does not every fresh ingestion provoke a fresh discharge of gastric juice? Certainly such a procedure, to say the least, must be subject to very great uncertainties. The stomach is well called an "acid gulf," "which we have to guard against, else our artificial pancreatic secretion is useless, of no earthly avail." It seems more probable that this "acid gulf" would swallow up any adventurous pancreatin which should attempt to cross it, than that the rash adventurer should cross it in safety. But, theory aside, it is claimed that clinical experience justifies the conclusion. It, however, should not be forgotten that clinical experience is invoked in defence of the use of pancreatin, not only unguarded by an alkali, but actually in combination with acidulated pepsin, which both Dr. Roberts and Dr. Fothergill assert to be fatal to pancreatin. The whole course of therapeutics is strewn with the wrecks of remedies which have been foisted upon the profession by the *supposed results* of clinical observation. Perhaps nothing is more delusive than a fragmentary and ill-digested collection of clinical facts. The sources of error are too numerous, and the conditions too complicated, to allow clinical observations to determine any important conclusion until many facts, well observed and carefully collated, have been brought to bear on the question. More especially must this be the case when the clinical observations contravene what are supposed to be well-demonstrated scientific facts, as in the case under consideration. Science will be of little avail in promoting the advancement of the medical art, if facts established by research and observation are to be lightly set aside by clinical observations short of absolute certainty. It seems far more reasonable to conclude that clinical experience will in the end conform to scientific demonstrations.

But whichever way the progress of observation and experience may determine this question, pancreatin has before it a wide therapeutic field. Second only in importance to the promotion of the digestive act within the organism is the adaptation of foods to the conditions of disease. The whole subject of the nutrition of the sick may be influenced by the use of this agent. The patent fact that the stomach, in common with all other organs of the body, is impaired by all acute and many chronic diseases, affords a wide scope for the use of artificially digested foods; but more especially is pancreatin likely to revolutionize the vexed question of infant feeding.

The principal obstacle to the successful administration of cow's milk is alleged to be the density of the coagulum formed by the action of the acids of the stomach upon the casein of the milk, thereby preventing its proper digestion. The devices for overcoming this difficulty have been numerous, but none of them entirely satisfactory. The use of pancreatin preparations appear to meet this difficulty fully. Dr. Roberts[1] ascertained by many experiments that pancreatin acts with great rapidity upon the casein of milk, and if not fully peptonizing it, certainly rendering it non-coagulable by heat or acids. This would seem to leave little to be desired in the matter of the adaptation of cow's milk to the purposes of infant-feeding. In the case of feeding infants upon farinaceous substances containing a large preponderance of starch, as they all do, the objection to their use is deemed to lie in the inability of very young infants to saccharify starch, either by the action of the salivary or pancreatic secretions. This inability to digest starch has been attributed to non-development of the salivary and pancreatic functions, which, it is alleged, has been physiologically demonstrated. But over and above any demonstrations, such inability might well be inferred from the fact that infants are constituted to receive, and the Creator has provided for their use, a food which requires the action of neither salivary nor pancreatic digestion. The salivary secretion, being only diastasic, finds nothing in the milk to act upon. The gastric juice is amply sufficient to digest the casein, and as to the fat in the milk, it does not require the action of the pancreatic juice, for *all nascent milk* is in a *perfect state of emulsification*. So it appears that the infant is fully able to digest milk through the action of the stomach alone, and we may fairly infer that functions would not be provided for before there was need for their employment. This amylaceous apepsia of infants has been met by numberless devices, as is attested by the legion of infants' foods, which, by methods more or less effective, have been devised to overcome it. The most complete as well as the most scientific of these methods, is that known as Liebig's, which consists in saccharifying the starch by the action of the diastase in malt. This is an expensive and somewhat difficult process, so much so as to be unsuccessful in the hands of the average mother or nurse, and has consequently fallen into the control of manufacturers. But by the use of artificial pancreatic preparations this conversion of starch is accomplished with the minimum of trouble and skill. It consists simply in adding to the cooked food, at blood-heat, the pancreatic liquid, and allowing it to stand in a warm place one hour. A process so simple and so effective certainly seems likely to banish many of the infant foods which are now urged upon the attention of mothers and physicians.

The question, "What is the place of pancreatin in therapeutics?" may, in view of the facts set forth above, be confidently answered: Not as a remedy to be administered internally, but as an agent for adapting foods to the impaired digestive functions of the sick, and especially to the preparation of cow's milk and farinaceous foods for infant feeding.

[1] Lumleian Lectures.

THE LATE DR. GEORGE M. BEARD.[1]

A Sketch.

By A. D. ROCKWELL, M.D.,
NEW YORK.

Mr. President and Gentlemen—The date and place of a man's birth, some of the details of his earlier life, educational and otherwise, an enumeration of the amount, and an estimation of the character of his work—these in the main fulfil the necessities of the ordinary obituary record.

All these points have, however, been more or less fully dwelt upon in the various notices of Dr. Beard that have been written, and in complying with the altogether unexpected solicitation of the president that I prepare a brief sketch of my late associate to be read before this Academy, I shall confine myself rather to what he *was* than to what he did. What he did, in the way of professional literary work, must be known to all who keep abreast of the current of scientific research, although few have any conception of the vast amount of labor that was accomplished in the short space of his forty-three years. The simple enumeration of his various books, monographs, pamphlets, and magazine articles, would consume the time that can well be spared for this presentation, and I shall therefore, as an evidence of his wonderful industry, ask you to accept my statement that few of his age in this or any other country, equalled him in the amount or variety of his literary work.

[1] Read before the American Academy of Medicine, October 9, 1883.

Opinions will differ as to the value of some of it, but that most of it was original, stamped with his own individuality, and presented in such a clear and lively way as to compel attention, all must agree. The impulse in him to work was so strong, that in his waking moments I do not suppose he was ever absolutely idle; his mind was constantly busy, appropriating the facts and casual suggestion of every-day life, for a possible future use or reference. However great the pressure of professional or literary work, he was always ready to drop everything for the purpose of conversing. It made but little difference whether the one with whom he was in communication was intellectual or the reverse, he would listen as long as anything was to be said, and no utterance of value, or striking manifestation of character, escaped him.

I have often been amused and even amazed at the patience and gravity with which he would listen to the most trivial talk and the most absurd expressions of opinion, but I soon learned that these not infrequently constituted the basis of much that was strong and original in his writings. The power in him to formulate the crude ideas of others, seemed to be instinctive.

Much of the wide and deep meaning represented by common and constantly reiterated expressions, he in some way drew to a point, and gave to it a "local habitation and a name." As has been well said of him, "he worked because he loved to work; not as a slave, but as a child filled with and prompted by filial devotion, and in the very hour of his dissolution he expressed the hope that some one would take up his work at the point he left it and carry it forward, and he whispered the wish that he might be permitted, as a contribution to his work, to place upon record the thoughts of a dying man."

Among many illustrations of his devotion to work, I recall the fact that soon after the late war, and in the beginning of our professional relationship, I observed among his effects an immense pile of manuscript, which upon inquiry I found to be a work of fiction, written for want of something better to do, while serving as assistant surgeon in the "Gulf Squadron." Parts of it were intensely interesting, and contained many graphic descriptions of life and character as he saw it, and if published would undoubtedly have proven a valuable contribution. He however regarded it as of little account. Its purpose as a vehicle of expression when there was no special work at hand, had been served, and he allowed it to become scattered and finally destroyed. Such was the facility and accuracy with which his thoughts struggled to the birth in written language, that his pen was equally ready at his desk or in car or boat, and his manuscript seldom received a correction; but the publisher will not soon forget, nor will I, the sad havoc he played with the proof-sheets in his additions and emendations.

Perhaps the most striking trait of Dr. Beard's character was his humor. With an expression of preternatural gravity, he yet seemed as was said of Jean Paul Richter "to exist in humor; to live, move, and have his being in it." That shallow endowment termed irony or caricature, which often passes by the name of humor, but consists chiefly in a certain superficial distortion or reversal of objects, and ends at best in laughter, found little place in him. "True humor springs not more from the head than from the heart," and in Dr. Beard it found its best expression in his intercourse with those far below him in the intellectual and social scale, and so the relations formed with this class became immediately pleasant and helpful.

In him was illustrated Carlyle's remarkable statement that "Humor is a sort of inverse sublimity, exalting as it were unto our affections what is below us, while sublimity draws down into our affections what is above us. The former is scarcely less precious or heart-affecting than the latter; perhaps it is still rarer, and as a test of genius, still more decisive. It is in fact the bloom and perfume, the effluence of a deep, fine, and loving nature, a nature in harmony with itself, reconciled to the world, and its stintedness and contradiction, nay, finding in this very contradiction, new elements of beauty as well as goodness."

The reputation for a certain eccentricity which was so universally accorded to Dr. Beard, was in great measure due to this element of subtle humor, born with him, for between the intense solemnity of his countenance and the thought about to be uttered, there was such an utter incongruity, that it is not to be wondered at that the stranger or casual acquaintance should look upon him as something of an enigma. Therefore it was that few men in our profession have been so little understood, or as it might be put, more grossly misunderstood.

One of the most kindly and genial spirits that went in and out among us, he has been subjected to an amount of abuse, both public and by private communication, most unmerited. Amidst it all, he was to outward appearances as unconcerned as if every shaft was directed elsewhere than toward himself. Against those who struck the hardest and with the least provocation, the only revenge he ever sought or wanted was the exercise, at their expense, of a little of his inimitable and quaint humor; at times, not unmixed perhaps with a shade of contempt. On the contrary, a notable characteristic of Dr. Beard in his estimate of the life and work of others, was *tolerance;* and more than this, he practically held that no character was ever rightly understood until it has first been regarded *not only* with tolerance, but with *sympathy* as well. One other element of character which contributed not a little to this antagonistic feeling, was a positiveness of statement which, in the minds of many, could proceed only from intense and offensive egotism. That Dr. Beard was egotistic, in the sense of placing a high value on his own interpretation of certain phenomena in physics and psychology, as against the opinions of non-experts in these realms of science, cannot be denied. It was, however, that egotism that comes from the consciousness of a clearer and a keener insight, and no better evidence of its inoffensive character is wanted than the fact that those who knew him most intimately, found nothing disagreeable in the manner of these expressions of opinion.

As he said of himself, "he never argued, he simply asserted." This was the result partly, of a natural disinclination to polemics, and partly to a settled conviction, that the surest path to establish the truth as he understood it, was to boldly and persistently reiterate it.

Many instances could undoubtedly be given, where those who were in any way placed in opposition to him, would bear unreserved testimony to the height of his conceit; and from their standpoint, this judgment would be correct. On one occasion, he was in court giving testimony in favor of the plaintiff in a suit for damages. The defendant's counsel, an astute lawyer, after a severe cross-questioning, in which in every way, he attempted to belittle the attainments of the witness, suddenly asked him if he had not been in Germany lately. The answer was that he had. "For the purpose of learning, I suppose?" suggested the lawyer. "Not at all," was the answer, "I went over for the purpose of instructing them."

Not many years ago, in a somewhat celebrated trial, he had been on the witness stand several hours, and had sorely tried the patience of the cross-examiners by his cool assumption of superior knowledge, until in anger one of them finally said:

"Then it is to be presumed that all authorities who differ from you in this matter, are in error?"

"It is to be presumed that they are," was the reply.

Some have said that he sought notoriety, and worked selfishly for his own ends. In regard to this, *I* write in remembrance of the time, after our separation, when impelled solely by his ever restless instinct for research, he

neglected every expedient of private prudence, for the purpose of investigating along lines which could in no possible way bring in any return, and in this he persisted, until his practice, which was his only reliance, was so nearly ruined, that for the time being he abandoned it altogether for another field. He soon returned to it, however, and with what success is well known. After his death, there was found among his papers, a rather extensive pile of manuscript, which for a better name, might be termed a series of autobiographical sketches. I refer to them here because they illustrate many points of his character, and especially this tendency to humorous exaggeration of which I have spoken. Any one who knew Dr. Beard with any degree of intimacy, was aware that he seemed utterly destitute of any financial sense, so far as having any appreciation of the value of money, excepting as a present necessity. Accordingly, there were times in his earlier professional life, and occasionally up to within more recent periods, when he was closely beset by clamorous creditors, until to most people life would have been a burden. It was during one of these periods undoubtedly, that the portion of the autobiographical sketches was written, referring to the mutual relationships of debtor and creditor. A more unique and quaintly humorous exposition of this relationship I can well imagine was never before presented. From so much that is good it is difficult to select, but I will venture to give one short extract:

"I congratulate myself, that few persons at my time of life, have succeeded amid severe discouragements, in honestly acquiring so admirable a band of creditors; in that select circle, are found names, of whom, if the world is worthy, certainly I am not. It is truly worth all the deprivations and obstacles, and misunderstandings I have encountered in my pathway through this vale of sorrows, to have been brought into such an intimate relation, for next to marriage, debt is the closest of all connections, and tends to make the parties concerned, thoroughly acquainted.

"It has been said by those who regard themselves as wise, that you must winter and summer with one, before you can know him, but I will recommend a shorter and surer road to acquaintanceship—the getting in debt to a man or allow him to get in debt to you. Such delicate relationships, bring out as I have noticed, the finer and subtler and least suspected qualities of human nature, that would never reveal themselves to any other test whatever; indeed, no man can be said to know himself, until he has been either a debtor or creditor.

"Not the least of the charms of the relationship of debtor and creditor, if one may judge from his own experience, it its permanency; in this feature it is certainly superior to wedlork, or to any other earthly relation. Marriages are followed too often by separations, divorces, or at least by infidelities; but my creditors, or their representatives, are never long away, they never sue for a divorce, and are faithful unto death."

Let it not be understood from this that the subject of this sketch was indifferent to the claims of others. His readiness further on when the ability came, to meet these obligations, is sufficient evidence to the contrary, and I have alluded to this somewhat delicate matter, that the testimony of one who knew him better than most others, might be borne to the essential integrity of his character in this respect; and while with the rest of mankind his imperfections are sufficiently manifest, it is an education, in this age of greed and gain, and backbiting, to have held communion with a man, who, so far as all outward evidences are concerned, seemed altogether free from envy, hatred, and malice.

Judged by many an accepted standard, he would be readily enough disposed of, and consigned by self-satisfied plodders to the oblivion appointed for all strange and misunderstood things, but tried by the great law of culture, which leads every man to become what from the beginning he was created capable of being, "resisting all impediments, casting off all foreign adhesions, and show himself at length in his own shape and stature, be these what they may;" judged, I say, by this standard, he represents to his contemporaries, an interesting, unique and lovable personality.

A CASE OF TARTAR EMETIC POISONING.

Recovery after taking One Hundred and Seventy Grains.

By JAMES STRATTON CARPENTER, M.D.,

Resident Physician Episcopal Hospital, Philadelphia, Pa.

Thomas C——, aged twenty-one, employed in the dispensary department of the Episcopal Hospital, was admitted to the medical ward on the afternoon of June 30th, with all the symptoms of acute antimony poisoning. It was learned on inquiry, that, mistaking a bottle of tartar emetic for one containing cream of tartar (the latter having on several previous occasions satisfactorily relieved the constipation to which he was subject), he had poured out several teaspoonfuls of the drug into a tumbler of water, and then drank the solution.

No unpleasant symptoms occurred for a quarter of an hour afterward, when he was taken violently ill, and vomited, as he expressed it, "a wash-basin half full." This was followed by several more attacks of vomiting, accompanied by a burning sensation, which later increased to violent pain along the œsophagus and in the epigastric region. When admitted to the ward, half an hour after taking the poison, he was in a condition of extreme prostration, amounting almost to collapse, with coldness of the extremities, a weak, thready pulse, and the accompanying symptoms of a gastro-enteritis that were distressing to witness. The contents of the stomach having been thrown off, the continued emetic action of the drug but served to add to its depressing effect on the system, and after the most violent and oft-repeated efforts at vomiting, which were followed by the ejection of a few drachms of bilious fluid, or of mucus mixed with blood, the patient would sink back thoroughly exhausted.

The full emetic effect of the drug having been obtained, the indications to be met were: First, the administration of the recognized antidote, tannic acid; and second, the proper remedies for a gastro-enteritis, accompanied by a most alarming depression of vital energies. Copious draughts of the tannic acid solution were accordingly given, and these followed by albuminous drinks, the deodorized tincture of opium being given for the burning pain complained of in the abdomen. The thermometer at this time indicated a body temperature of but 95° Fahr., and the radial pulse, which was scarcely perceptible, was slow and intermittent in character, and it seemed as though the hope were not to be realized, that in the violent vomiting which had first occurred enough of the poison had been gotten rid of to prevent a fatal termination.

In addition to internal stimulation with small and frequently repeated doses of spts. frumenti and liq. calcis, external stimulation by means of hot-water cans and vigorous friction of the chest, legs, and arms with heated towels was kept up, and it was only after three hours' unremitting care that reaction was established. The temperature rose to 99.5°, and the pulse improved in rate and force. The patient had a typical "rice-water stool," streaked with blood and accompanied by rather severe cramps in his legs several hours after his admission, but this was the only evidence of the intestinal irritation that occurred of that character.

The abdominal pain was largely overcome by the deodorized tincture, of which gtt. cxx. were taken within two hours, in addition to a hypodermic of morphia. The distressing thirst was a difficult feature of the case to meet, but a most grateful drink was obtained by cooling

the egg and milk mixture with ice, of which he drank frequently in small amounts.

At first the urine was scanty and dark-colored, but contained neither blood nor albumen. The after-treatment was the continuation of the milk diet, with entire rest in bed for three or four days, when the patient was discharged cured, and up to the present time, over two months since the accident, has experienced no further trouble.

The amount taken was not less than one hundred and seventy grains—which I ascertained by afterward asking the patient to pour from a bottle of the tartrate of antimony and potass. the amount he thougut he had taken, and then weighing it—a rather imperfect method of ascertaining the fact, but, when it is remembered the object the patient had in view in taking the supposed "dose of salts," the estimate will not appear at all too high.

In this case it may be interesting to note:

First.—The length of time that occurred between the ingestion of so large an amount of the poison and the production of its first symptoms, as being in accord with the accepted idea of the action of tartar emetic upon the centres, absorption being first necessary, rather than its having any direct local irritant action upon the membrane of the stomach, and so causing the violent emesis.

Second.—The urine, which, according to some authorities, in the beginning of mild, and even of fatal cases, is increased in quantity, was in the present case almost suppressed.

Third.—The respirations, which are said to become altered in rhythm by the action of the drug on the respiratory centres, were unaltered in character.

Fourth.—There were no disturbances of sensory function, the ability to appreciate thermic irritants being attested by the patient's ready recognition of the elevated temperature of the hot cans with which his bed was provided.

Reports of Hospitals.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D.,

PROFESSOR OF GYNECOLOGY IN THE UNIVERSITY OF PENNSYLVANIA.

ABDOMINAL TUMOR IN A YOUNG GIRL—REMOVAL OF THE OVARIES IN THE TREATMENT OF CONFIRMED MASTURBATION AND OF OVARIAN INSANITY.

GENTLEMEN: The first patient that I show you is a young girl whom I have not yet examined. I shall elicit the history before you.

She is seventeen years of age and single. Puberty began at the age of sixteen and she has menstruated three times, the last time being in the latter part of last December. There have been intermittent abdominal pains and some nausea.

She has menstruated. This shows that there is no congenital atresia and that a passage exists. Before the first menstruation she had a "good deal of pain in the abdomen," but she did not suffer at the subsequent periods. I have asked her about the color of the discharge, but there appears to have been nothing abnormal about that. Were there retention of the menses the discharge would be exactly like tar. By retained menstruation we mean that the woman has menstruated, but that owing to some obstruction, either in the neck of the womb or in the vagina, the blood cannot escape. The fluid parts are absorbed and when it does come away, it is a thick, tarry fluid. There has been nothing of this kind in the present instance. To complicate matters, it appears that she has a tumor.

The first thing that you should think of in all cases of suppression of the menses is pregnancy. It is astonishing how many blunders are made on that very point. Only a short time ago a lady was brought to me from a very distant city by a kinsman (who was a physician) to consult me in regard to a tumor, which turned out to be pregnancy. Had she not been a kinswoman the physician would probably have discovered the nature of the tumor. I have had many such cases. Pregnancy is the first thing that you should consider in all these cases, no matter how unexceptional may be the character of the girl, for all are liable to fall as did David, although he was "a man after God's own heart." This patient came here on account of the suppression, and knew nothing about the existence of a tumor.

Here you see the tumor for yourselves, and the question arises as to its nature. If this were pregnancy we should look for labor in the latter part of this month, the menses having stopped in December.

I now turn to the breasts. In pregnancy certain changes take place in the areolæ, with which you are all familiar. They are, however, not pathognomonic, and depend to a great extent upon the complexion of the skin. Remember, also, that the excitement of having the breasts examined will sometimes cause a condition of the skin resembling goose-flesh, and a supposed enlargement of the glands of Montgomery. In the present instance the breasts are not altered, and they do not contain milk. Her complexion is remarkably good, being, in fact, quite florid, but this may be due to excitement.

The tumor is on the right side, movable, somewhat irregular, and rather high up. I can place my hand below it.

I shall now examine *per vaginam.* In private practice my favorite method of examining is to bring the woman's nates over the edge of a hard mattress and place her feet on my knees. I find the cervix pushed away back and I also feel a second tumor, which appears to be a prolongation of the tumor above. To the touch this feels like a case of multiple fibroids, but such a condition in a white girl of this age would be very remarkable. It would not be so in a colored girl. I find a central hymen. Still there might be penetration without rupture of the hymen. There are then two tumors; one directly over the bladder, which is plainly too large to be the womb, and a second tumor above, united to the lower one. With the greatest care, I have introduced the sound. The womb is to the left, and appears to be wholly independent of the tumors. It measures three inches, but further information I cannot glean, because she is so restless and nervous that it is impossible to make a thorough examination. My diagnosis at the present time is that there is a solid tumor of the womb or of the ovary, and I think more probably of the latter, and I fear of a malignant nature. If this tumor were a fœtus, it must be an extra-uterine pregnancy, but extra-uterine pregnancy should not stop the menses. The womb evidently has no connection with the tumor unless it be by a long pedicle. She will not submit to the administration of an anæsthetic to-day, but I shall try to persuade her to return next week and allow us to administer ether in order to make a thorough examination.

Removal of the ovaries in the treatment of confirmed masturbation and of ovarian insanity.—Our next patient has been a great sufferer. She has been bedridden since May, but for a long time before that was a great sufferer. She sleeps very little, has constant ovarian and vesical pain and great distress in the back and pelvis. The pain radiates from the ovary, down the inside of the thigh in the course of the genito-crural nerve. She finds it impossible to walk, and, although well nourished, is a confirmed invalid. In addition to these symptoms, she is unable to pass her water, and had to have it drawn by a physician, until she learned how to introduce the catheter herself. I grasp a fold of the abdominal wall and you see that there is at least an inch of fat, showing that

she is well nourished. The expression of the face is that of health. You may lay it down as a broad rule, that when there is severe pain in combination with a well-nourished condition of the body the pain is not due to organic or structural disease, but is the result of nerve trouble. There are, however, some exceptions to this rule.

Before sending the patient out, I wish to show you hypertrophied nymphæ and a condition of unnatural redness which exists about the vulva. These are the only symptoms that can be seen. (The patient was now removed.)

This is an interesting case. This girl spent over four years in as many institutions before I saw her, and yet she is no better. When I observed her bright expression of countenance, and her well-nourished condition, I at once concluded that she was suffering from some nerve trouble. On making a vaginal examination I found such marked symptoms that I turned to the physician with whom I saw the case and whispered to him, "This must be a case of masturbation brought on by mental trouble." He said that such was the case and that it had been found out in all the institutions in which she had been an inmate. There was excessive hyperæsthesia of the parts, but no uterine trouble proportionate to the severity of the symptoms. There was some congestion of the ovaries and of the womb. The ovaries were very tender and could be felt from below, a little enlarged. The nymphæ hung down like dewlaps, and this generally indicates masturbation by attrition.

The history is that she had an early disappointment in love. This produced the mental trouble which caused the excitement of these organs. We are all emotional creatures, and during the sexual life these organs exert a great influence over both men and women. Love is not an abstract idea, not sheer cerebration, but a complex emotion. It is an alloy made up partly of mind, partly of body. In this case the result of the disappointment was a shock and congestion to the whole nervous system, and a shock to those organs so exacting during woman's menstrual life—the ovaries. She got into the habit of masturbating and has practised it ever since.

This is a serious case, one of positive disease, and is not to be sneered at or put to one side with a shrug of the shoulder. This girl is a terror to her parents, who are glad to get her out of the house. They have had to employ nurses without number, and she has worn all of them out.

What is to be done? Such cases as this one open a new field for investigation. I purpose to remove the ovaries. Here is a woman lost to society and a burden to herself and friends. I do the operation experimentally. Strange as it may seem to you, the site of sexuality in woman, as well as in man, has not been positively determined. Even in the eunuchs, who had been so before the age of puberty, the sexual desires are not wholly obliterated. On this account the Turks (among whom I lived for many years) demand not only the removal of the testicles, but also the amputation of the penis flush with the pubes. In order not to wet his clothes, every eunuch has to carry with him a catheter through which to urinate. We see the same thing illustrated in our streets to an unpleasant degree by the cattle, for the steers or young oxen play the part of bulls. Women in whom the ovaries have never developed possess no sexual feeling; but when the ovaries are removed after puberty it is questionable whether the sexual feelings are at all influenced. I know of cases in which keen sexual desires were not in the slightest degree blunted by the operation. In explaining such cases, some say that all of the ovarian tissue has not been removed, or that there may be several supplementary ovaries. There is a certain degree of logic in this reasoning, for abnormal cases of this kind do occasionally occur, but it is not wholly sound.

Four years ago we had in this building an abominable case of masturbation, and in the most repulsive-looking girl I ever saw. She was a patient of one of my colleagues, who in vain did all he could to quench her inordinate desires. A consultation was therefore held by several members of the staff as to the propriety of removing the ovaries. I objected to this operation in her case for the following reasons: In the first place, the girl was here without friends to advise her, and was innately bad; I thought also that in the future she might give me trouble by prosecuting me for having unsexed her, and such a tale would tell well on a sympathetic jury. In the second place, I was not sure that the operation would have the desired effect of making her a respectable member of society.

I was asked some time ago by the superintendent of an insane asylum to spay a half-idiotic girl. It was impossible to keep her under strict surveillance, and the sexual feelings were so urgent that she was at the beck of the first comer. She had already borne two illegitimate children. I told him that I should feel humiliated in removing the ovaries simply "to let copulation thrive," but I was willing to perform the operation in order to prevent an idiotic offspring, an end which seems to me legitimate. At the same time I told him that I must have a written authority from the managers of his institution that I had their consent. After an interesting discussion, the managers decided not to give the needful permission, and so the matter fell through.

Less than a week ago I was called to an insane hospital to see a case of erotic insanity exhibited by masturbation and foul language during menstruation. I was to decide whether or not it was best to remove the ovaries. After a careful investigation, I could not detect any local disease whatever. There was tenderness of the ovaries, but no enlargement could be discovered. The girl was perfectly sane outside of the menstrual period, and was anxious to have the operation performed. The father and mother have also signified their consent. I told the doctor that, while I did not feel sure that extirpation of the ovaries would remove the sexual desires, it was an operation well worth trying, for, if it did not cure her, it would prevent her from bringing into the world an insane offspring. Further, that the operation could do no harm, unless the patient died, and that death in such a case was so questionable a harm that it would not grieve me. I should feel that I had done my duty, and that she and society were better off. On the other hand, when I remove the ovaries for other causes and the patient dies it grieves me to the quick. I shall probably perform oöphorectomy in this case next month.

The first case of oöphorectomy mentioned in history was performed for the purpose of abolishing the sexual feelings. This case may be apocryphal, although it seems to be as well authenticated as many other accepted traditions of old-time heroes. It is said that a Hungarian sow-gelder became so infuriated at his daughter's lasciviousness that he forcibly extirpated her ovaries; but history, if my memory serves me no trick, does not tell us whether or not she was more chaste after the operation, and this is the point that I am after.

The father of the girl whom I brought before you came to me and told me that if his daughter would not consent to the operation, that he and his wife wished me to do it by force. This incident shows how wearied out they were with her pains, and aches, and screams, and fancies, and other hysterical manifestations, whose name is legion. I told the girl what her father had said to me, and added: "You are twenty-three years old and your own mistress, and I shall not touch you without your free consent." This she gave me in the presence of several witnesses. I once removed the ovaries by force, but I shall never do so again, for it is an act that a jury might take an ugly view of. The case is as follows:

Several years ago, when about to attend a meeting of the State Medical Society, a physician of the city in which the meeting was to be held, wrote to me that he had a case of ovarian insanity which he thought was a proper one for oöphorectomy and requested me to bring

my instruments along. He took me four or five miles into the country to a dilapidated hovel, where I saw a wretched girl just coming out of a violent insane attack. She was insane all the time, but had frightful exacerbations about the menstrual period, so that for three weeks in every month she would be beyond all control. I found on examination that both ovaries were low down, enlarged, and extremely tender. I considered it a proper case for operation. The parents, worn out with care and fatigue, were very anxious to have the operation performed, and at once gave the necessary consent. In the afternoon we returned, forcibly administered ether, and removed the ovaries. She has been much benefited by the operation. All the violent symptoms are gone, but her mind is weak. Had her parents put her in an insane asylum she would have got well.

I have wandered from my subject, but while speaking of ovarian insanity, let me mention some cases that I have cured. All of these were accompanied by erotic feelings.

One was a married lady who about a week before the menstrual period would begin to be insane and become uncontrollable. These attacks would last for three weeks. After the paroxysm was over she would be perfectly sane. She had been to two or three institutions. Although the physicians in charge of these institutions objected to the operation, I removed the ovaries. She was restored to perfect mental and physical health. One of the gentlemen who had opposed the operation was converted by this case, and a short time ago sent for me to come to his asylum to remove the ovaries in an analogous case. I could not go at the time, and shortly afterward the patient died from some acute disease.

The second case was one of those cases lying on the border-line between insanity and hysteria. She had become alienated from her family, and imagined that her friends were her worst enemies. She had excessive menorrhagia, and had been bedridden for years. I removed the ovaries, and she got mentally well, while her physical condition was very much improved.

A third case was that of a lady of most excellent family. From an accident she had received a severe mental and physical shock. This was the beginning of the disease. Her health began to fail, ovarian turgidity appeared, and finally ovarian insanity developed. About a week before the menstrual periods the most horrible hallucinations would take possession of her, and she had mental fights such as Christian had with Apollyon. Later in the period she had an irresistible desire to kill a friend to whom she was most tenderly attached. Then, to save herself from injuring him, she made attempts to take her own life. She also suffered from menorrhagia, and was reduced to a condition of the utmost weakness. I was asked to see the case, and concluded with her physician that the ovaries were the seat of the trouble. After a good deal of opposition on the part of the family, the operation was successfully performed. Before the operation she could not touch meat because there was blood on it. Blood was on her clothing, in the air, and on everything around her. Like Lady Macbeth she saw blood everywhere. As she recovered from the effects of the operation it was interesting to watch these hallucinations gradually leaving her. Soon she was able to eat meat, and took large quantities of it. Now she is no longer insane; she is doing well, and is a wonder to all her friends.

I had another successful case, but at this moment I cannot recall the particulars of it. Were Dr. Baer present he would probably remember it.

In view of the fact that the removal of the ovaries has cured these cases, I think that it may do good in this instance. While I am not positive that the sexual feelings will be eradicated, I feel justified in performing the experiment. As regards the operation, it is performed in the following manner: A short incision is made below the navel in the linea alba, sufficiently long to admit two or three fingers. Each ovary, with its oviduct, is seized, the pedicle, consisting of broad ligament and blood-vessels, is transfixed, tied, and cut off. The wound is closed in the usual manner, but everything is done under strict antiseptic precautions. Although I do not believe with Tait that the oviducts preside over menstruation, I always remove them together with the ovaries, because by doing so I get a longer pedicle, and am less likely to leave ovarian tissue behind.[1]

Progress of Medical Science.

Syphilitic Fever.—Dr. Duflocq relates in *La France Médicale*, of August 30, 1883, the history of a young man, twenty-five years of age, who was admitted to hospital suffering from a fever. The attack had begun eight days previously with headache and vertigo followed by vomiting, after which fever and diarrhœa came on. There was also epistaxis a few days later. On admission the patient presented nearly all the symptoms of typhoid fever: the tongue was white; there was tenderness on pressure in the right iliac fossa, though the belly was not tympanitic; the spleen was slightly enlarged; heart and lungs were healthy. The temperature was 104.7°. The eruption of rose-colored lenticular spots was confluent over the abdomen, and very thick over the arms, legs, and thorax. They were large, slightly elevated, and disappeared momentarily on pressure. It was the great extent of this eruption that excited suspicion and led to further examination. A cicatrix resting upon an indurated base was found upon the glans penis, and there were enlarged glands in the groin. Mucous patches were discovered in the mouth and fauces. The patient was placed upon ordinary anti-syphilitic remedies, and the fever and eruption disappeared in about two weeks. Dr. Duflocq mentions as of diagnostic value in the differentiation of typhoid from syphilitic fever, the early appearance (third or fourth day), and the abundance of the eruption.

Management of Labor in Copenhagen.—Prior to 1877 a purely expectant plan was pursued in the management of labor at the Maternity Hospital in Copenhagen. If delivery was not accomplished within three hours, then resort was had to extractive measures. Since September 1, 1877, the method of expression has been employed in every case. In comparing the results obtained in two periods of four years each, by the old and new methods (1,780 of the former, and 1,559 of the latter). Dr. Weiss states that: 1, the frequency of hemorrhage occurring during the period of delivery has been markedly reduced; 2, retained placenta has been met with much less frequently since the method of expression has come into use; 3, rupture of the membranes has occurred more often; 4, post-partum hemorrhage is now of very rare occurrence. In view of these facts, the author thinks that midwives should always be instructed to manage labor in this way.—*Le Courrier Médical*, August 25, 1883.

A Candlestick in the Uterus.—The following curious case is found related in *Le Courrier Médical* of August 25, 1883. A woman, aged forty-nine, subject since puberty to periodical attacks of mania, but with lucid intervals, was admitted to hospital on account of an abundant and fetid leucorrhœa. Examination of the uterus showed a cervix covered with granulations and irritated by a discharge coming from within the womb. A sound which was introduced struck against a metallic body. This was removed and found to be the brass socket of a candlestick, measuring three-fifths of an inch

[1] On September 15th the operation of oöphorectomy was performed on the subject of this lecture, in a private room of the University Hospital. The ovaries and tubes had taken on cystic degeneration. The girl recovered promptly, but too short a time has elapsed to determine the issue of the operation.

in length, and four-fifths of an inch in diameter with a rim one and one-half inch in diameter. This socket was evidently detached from a candlestick introduced at some time into the vagina. The last pregnancy dated back twelve years, so the foreign body could hardly have been introduced at that time before the involution of the uterus. And yet it is difficult to conceive of a contracted uterus, in a woman past the menopause, seizing and drawing up into its cavity so large a body as that described.

THE TUNING-FORK IN THE TREATMENT OF NEURALGIA.—Dr. Rasori uses the tuning-fork in the treatment of neuralgic pains, applying it while vibrating over the course of the painful nerve. The sitting lasts about half an hour, when the patient is usually relieved without further treatment. He relates the case of a woman who had suffered from vomiting during the neuralgic attacks, but after the relief obtained by the application of the tuning-fork she was troubled no more in this way (*Cincinnati Lancet and Clinic*). The principle of this treatment is the same as that employed by Dr. Mortimer Granville. He uses an instrument, recently described in these columns, called the percuteur, by means of which he is able to make a number of taps in regular and rapid succession, and of varying intensity to any part of the surface of the body.

CURE OF OBSTINATE SCROTAL ECZEMA BY HOANG-NAN.—Hoang-nan is a vegetable substance of repute in Tonquin as a remedy against rabies, the bite of venomous serpents, leprosy, and several other grave affections. It contains nearly three per cent. of brucine and a small quantity of strychnine. Dr. Barthélemy relates in the *Bulletin Général de Therapeutique* of August 30, 1883, a case of chronic eczema of the scrotum in which this substance was employed with most happy effect. The patient, a gentleman about fifty years of age, had suffered for ten years from eczema of the scrotum, perineum, and upper and inner parts of the thighs. He had consulted numerous physicians, and had tried every conceivable remedy without experiencing any relief. Dr. Geneuil, the last physician to whom he applied, having read of the efficacy of hoang-nan in leprosy, determined to try it in this case. The patient commenced with seven grains per diem, gradually increasing to forty-five grains a day, in divided doses. While taking these large doses he felt the physiological effects of the drug (muscular tremors, trismus, and vertigo), but persevered with the remedy, and was rewarded at the end of ten days by a perfect cure of his affection. The amounts taken were larger than had been advised by Dr. Geneuil. In all five drachms were taken. The patient was seen eighteen months later, and had then had no return of the eczema.

RECOVERY FROM LOCOMOTOR ATAXIA.—Dr. Louis Henry reported the following case to the Victorian branch of the British Medical Association (*Australasian Medical Gazette*, July, 1883): A man, twenty-nine years of age, of temperate habits, and free from any suspicion of syphilis, had been suffering for some months from symptoms of progressive locomotor ataxia. The distinctive signs of the disease were well marked and steadily increasing in severity. He was first put upon large doses of iodide of mercury, but as neither the fulgurating pains nor any other symptoms were improved after a two weeks' trial, nitrate of silver, in divided doses of one grain per diem, was substituted. The patient was anæsthetized and the whole length of the spinal region was cauterized with the button of the thermo-cautery. The ulcers were kept open by a covering of a strip of linen smeared with resin ointment. The patient was further ordered the use of foot-baths of hot water and common salt three times a day; and during his stay in bed was to wear stockings containing powdered mustard. After about three weeks of this treatment, the nitrate of silver being gradually forced to one grain three times a day, the resin ointment was removed, and the back allowed to heal. The legs were now massaged twice daily, and a solution of iodide of potassium, eight grains, and liquid extract of ergot, one-half drachm, ordered to be taken at 8 P.M. and 3 A.M., with the view of allaying the slight pains in the legs and controlling the emissions, which rarely, but occasionally still made their appearance. A very marked improvement now began to show itself. The pains in the lower limbs completely disappeared, the abdominal constriction vanished, the emissions ceased, the walk and gait became more sure and natural, and the patient regained sensation in his feet, so that, with his boots on, he could, when the report was made, feel the divisions in the wooden floor. For the past two weeks he had been taking eight-minim doses of the liquor strychniæ, and faradization was applied to the spine and lower extremities by means of a wire brush. The improvement, which was very evident, would, the author hoped, be permanent.

ABSENCE OF THE UTERUS.—Dr. Tschernoguboff relates the case of a woman, twenty-four years of age, well nourished and of good physique. The labia were of normal appearance, but the clitoris was very small. The urethra was so dilated as to allow the finger to pass readily into the bladder. The vagina was very short and ended in a cul-de-sac. Combined vesical and rectal examination could detect no trace of a uterus. The woman had never menstruated nor had she ever had any vicarious hemorrhages. She had been married six years, but every attempt at coitus was accompanied with severe pain.—*St. Petersburger Med. Wochenschrift*, August 25, 1883.

A similar case was related by Dr. Stanley O. Warren at the recent annual meeting of the Maine Medical Association (*New England Medical Monthly*, September, 1883). The woman was twenty-five years old, of English descent. She had had an irregular flow of blood, slight in amount, from the rectum since her eighteenth year, and thought at times that it had come from the vagina. She had been married once and was making preparations for a second marriage. Intercourse was always painful, though sexual desire was present. The external genitals were normal, but the vagina was but an inch in depth and ended in a blind extremity. The ovaries could be detected by rectal examination; they were connected by a band of firm tissue which might have been a Fallopian tube or a rudimentary uterus.

THE LIABILITY OF ERROR IN EXAMINING FOR SUGAR IN THE URINE.—The following illustrates with what care and precaution every urinary examination in regard to the presence or absence of sugar ought to be made. Professor v. Heusinger in a late session of the Aerztl. Verein, in Marburg, declared that a certain individual desired to be examined in view of having his life insured. At the close of the physical examination he was requested to urinate. As he had micturated before entering the doctor's office he now could pass but a slight amount. The chemical examination gave a yellow-green precipitate (saccharine). At the examiner's request the man returned the next morning, and the urinary test presented a negative result. It turned out after a close questioning that the individual had suffered for months with gonorrhœa, and had used injections of sulphate of zinc. He had passed water and used this injection just previous to presenting himself for the first examination. Dr. Fettien, who was then consulted, found that if a solution of sulphate of copper is added to one of sulphate of zinc and tartaric acid and caustic soda in excess, a blue fluid is formed which contains, besides the constituents of Fehling's solution, sulphate of zinc. Added to boiling urine, the zinc is precipitated as a hydrate with a grayish-green color and the solution turns from blue to yellow. If albumen is added the same phenomena are observed, only the fluid above the precipitated zinc is reddish.—*Berl. Klin. Wochenschrift.*

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 13, 1883.

THE MEETING OF THE NEW YORK ACADEMY OF MEDICINE, AND THE PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS OF THAT BODY.

WE think this institution, so important in every respect for the profession of this city, and we may well say for the country, is to be congratulated on its favorable progress toward a settlement of those difficulties which have for a time stopped its scientific work, and even dangerously imperilled its very existence.

Our readers are aware of the fact that at the meeting, April 19th, certain resolutions were passed, the main object of which was to instruct the Committee on Admission to report no physician for election as resident fellow who is known by the Committee to be in opposition to the Code of Ethics of the American Medical Association. A full report of the proceedings was given in our issue of April 28th.

The effect of this was to make a new test for election, not based on character, acquirements, or professional standing, but on belief. The resolutions were adopted by a large majority, at a meeting packed for the purpose, by inducing every one to be present who could be persuaded to vote for it, when no suspicion was entertained by those who could not conscientiously vote for such a radical change, that such a movement was to be attempted.

Two weeks before the present meeting the President sent a letter to every resident fellow, which will be found on another page, and certain proposed amendments to the Constitution and By-Laws which he deemed necessary to put the Academy in a good working condition, and to restore harmony and prevent all future trouble in the Academy. Very soon after, a circular card was sent to the fellows, which is also reprinted on another page. We especially call attention to this card, for we think all will agree that this is the most astonishing document that ever appeared signed by such distinguished names, as regards its audacity of statement and its English—particularly that of the last sentence. We are not surprised to learn that many supporters of the old code at once avowed their intention to vote for the proposed amendments.

At eight o'clock Thursday evening, October 4th, the President, Dr. Fordyce Barker, promptly took the chair. The hall was packed, filling the main room, the room behind and the galleries, and very many were obliged to stand and quietly kept their places the whole evening.

After the routine business was finished, Dr. Austin Flint, Sr., rose to a question of privilege and asked leave to make a personal explanation: He stated that he had been frequently charged with inconsistency, in private and in public, in newspapers and in medical journals, and in other ways, in his action and conduct at two former meetings of the Academy. When the delegates to the Medical Society of the State of New York made their report in 1882, he then, at the request of the chief executive officer, whom at that time it would have been painful for him to deny any request he might make, moved, with entire heartiness, as it was in consonance with his own feelings, that the report of the delegates be accepted, and that further discussion of the topics and objects to which it referred be indefinitely postponed. He made the motion in good faith, because he believed that the discussion of ethics had no place in the deliberations of the Academy, but properly belonged to another society. At the last meeting of the Academy, he had voted for the resolutions of Dr. Austin Flint, Jr., and he had done so for the very reason that he believed their passage would have the same effect. He maintained that his conduct on both occasions was consistent and in harmony, and he hoped there would never again be a discussion of ethics in the Academy, either to-night or at any future time.

Dr. Flint was listened to with the closest attention and was applauded when he closed.

The President said he, and doubtless the Academy, had listened with great pleasure to the remarks of the gentleman whose name was held in the highest esteem by the profession, not only of this city, State, and country, but also abroad wherever there is a medical literature. He fully and cordially coincided with the sentiments expressed at the close of his remarks, and he hoped that the action of the Academy at this and the next meeting would effectively secure the result which both desired.

It was a favorable augury to see two men of the standing of the Ex-President and President again apparently working together for the same end.

A communication from the Council was then read, disapproving the proposed amendments and recommending their withdrawal. We have been informed that, including the President, there were present thirteen. That six advocated the foregoing communication and voted for it. The other six, thinking it of no consequence, as the Council had no authority in the matter, refrained from voting.

This statement was ready to be made, and the casting vote of the President on a tie would have been against the motion. But at this meeting it was found that the statement was not necessary.

Dr. Edward L. Keyes then moved the adoption of the proposed amendments of the Constitution and By-Laws.

In presenting these proposed amendments, Dr. Keyes remarked that he had been asked to do so by the President, and that he did so willingly, not only as a recognition of the great services the President had rendered the Academy, but also because he saw in their adoption an easy solution of the difficulties with which the Academy

was now surrounded, which difficulties would otherwise inevitably continue. He had always striven to live up to the old code, he was not a new code man, he had positively declined to join either party to the controversy now going on. It was therefore not in the interest of any faction, but wholly for the sake of peace, that he now offered the proposed amendments and moved their adoption as a whole.

Dr. Austin Flint, Jr., moved that the amendments take the usual course, and expressed the opinion that discussion on them at the present time was uncalled for.

Dr. Alfred L. Loomis seconded the amendments introduced by Dr. Keyes, and said that he did so gladly, for he was fully convinced that by their adoption the greatest danger that had ever threatened the Academy would be averted, and we should ever after be freed from such occurrences as had taken place at the last meeting. For the Academy to maintain its prosperity and its prestige, all matters of ethics and medical politics must be removed from it.

The President, interrupting: Every fellow has the power of expressing his approval or disapproval of any sentiments uttered by his voice if he can get the floor, or his vote, and I venture to suggest that it will better comport with the dignity of the Academy if all other modes of expressing either feeling be avoided.

Dr. Loomis, resuming: There were societies before which such matters properly came, but this was not one of them. The Academy was for scientific work and good fellowship, without fear of sharp tactics or bitter words. If the proposed amendments were carried, it would be impossible for any further disturbance of harmony to take place.

Our limits prevent us from giving more than a very brief abstract of the wise, temperate, and excellent remarks of both of these gentlemen, who spoke to the point, neither of them making any reference to codes.

Dr. Flint, Jr., disclaimed any desire to delay or obstruct the business of the meeting, but again urged that the amendments could not be acted upon to-night and ought not to be discussed. He renewed his motion, and it was now seconded.

Dr. C. C. Lee moved, as an amendment to Dr. Flint, Jr.'s, motion, that the Academy resolve itself into a committee of the whole, for the purpose of discussing the amendments. Seconded.

Dr. Flint, Jr., protested that his motion could not be amended.

The President decided that Dr. Lee's amendment was in order. It was put, and declared carried. A division having been called for, the amendment was found to have been carried by a vote of 135 to 15.

The President then said he considered fairness and courtesy required him to appoint as chairman one who stood on the record as having voted with the majority at the last meeting of the Academy. He should nominate one known to all as familiar with parliamentary usages, Dr. Ellsworth Eliot.

The Chairman named Dr. W. M. Carpenter Secretary of the Committee of the Whole.

By request the proposed amendments of the Constitution and By-laws were then read by the Secretary.

Dr. Louis Elsberg moved that when the committee rise it report to the Academy in favor of the proposed amendments as a whole. Seconded by Dr. C. F. Taylor.

Dr. D. B. St. John Roosa thought fairness required that the President should have a chance to be heard as to his reasons for proposing the amendment.

Dr. Barker rose and spoke for about a half hour, commanding the closest attention and a peculiar stillness for such a large meeting, except when interrupted by applause. We regret that we can give but a brief abstract of his remarks.

He said he had not intended to take part in the discussion on the amendments, but was anxious to hear any objections to them that might be raised in a full and fair discussion. Since the request had been made, however, he could not hesitate. He repeated his gratification at Dr. Flint, Sr.'s, remarks. When, after the recent action of the State Society, it was feared that its action on the ethical question would be brought into the Academy, Dr. Flint, this renowned man whom he could not think of except reverently—had introduced a resolution to postpone the matter indefinitely. The resolution was carried unanimously, and had worked most successfully, until the action taken last spring, which had entirely changed the aspect of matters, and was, he thought, most injurious, imperilling the prosperity and usefulness of the Academy, inasmuch as it made two parties, the contention of which would keep out new members. He had, therefore, set about devising measures to undo the injury thus inflicted, and to guard against the possibility of further mischief of the sort. Without consulting anybody, but as the result of a careful study of the constitution and by-laws of similar scientific medical societies in Europe, such as the Royal College of Physicians, the Royal College of Surgeons, the Royal Medico-Chirurgical Society of London, the British Medical Association, the Academy of Medicine of Paris, and others, he had prepared the amendments of the Constitution and By-laws now before us. The ethics of these amendments were in every respect as high as those of any of the societies that he had mentioned. He had hoped that for the sake of the Academy he would have the support of those who had raised a perpetual monument to their memories by their liberal gifts in building this beautiful hall, in filling the shelves above us, and by their long untiring work for the Academy. He felt that they never would be willing to see their labors come to nought, and this property of the Academy, which, the Chairman of our Board of Trustees said the other evening, amounted to one hundred thousand dollars, practically ruined. All know that property devoted to a special purpose most rapidly depreciates when it fails of its object. He had been greatly pained when he found that his judgment was wrong, as he was sorry to say it often was, and that some of the best of these men were opposed to these amendments, which he believed so necessary for the future of the Academy.

This course reminded him of the farmer who saw a hawk on the ridge-pole of his barn, which he thought had stolen his chickens, and ran into his house, seized his gun, and fired at him. The wadding from his gun set fire to his barn, which was burned with all its contents. But the story is not ended, and there is another moral.

A bystander, who had listened to the story with gaping mouth and breathless suspense in all its details as to the size of the barn, how much it had cost, how many tons of hay, bushels of wheat, rye, and corn had been burned, exclaimed at the end, "Did he kill the hawk?"

Dr. Barker then explained his amendments, and answered some objections which had been urged. The Committee on Education was omitted, simply because it had no practical duty or utility; the Committee on Ethics, because its functions were relegated to the Council, and because it abolished an inquisitorial committee which was always liable to do as much harm as good. Unfortunately, there has grown up, from the unhappy controversy now going on, a kind of distinction between ethics in its highest and best sense and what is technically called the "code." He would advocate for the Academy the highest ethics, both in theory and practice, and if any of its fellows were found wanting in this particular, he would adopt a slang phrase of the day and say, "turn the rascals out." The resolutions passed at our last meeting made it absolutely imperative, in the interest of the Academy, that in the amendments all allusion to the code should be left out. If this was a misfortune, the responsibility will rest with those who introduced the resolutions.

Dr. Barker then alluded to some other objections, which had been urged.

Dr. Flint, Jr., thought that every one present knew, before the President's explanation, precisely what the amendments implied—they struck out the Code of Ethics, and the other amendments had had to be made to correspond. The report of this Committee of the Whole would amount to nothing. It was simply impossible for the amendments to obtain a three-fourths vote at the next meeting. Therefore, their introduction could only act as a firebrand. Discussion was wholly unnecessary, and he, and those who thought with him, would not take part in it.

The President moved to amend Dr. Elsberg's motion as follows: *Resolved*, That in the opinion of the Committee of the Whole it is advisable that the amendments to the Constitution and By-laws proposed this evening be adopted as a whole, and that the Chairman be so instructed to report. He also gave notice that he would subsequently move that, when the Committee rose, it should report progress, and ask leave to sit again on October 18th.

[A motion to rise having been made and seconded, it was put and declared lost.]

The President again brought up his motion instructing the Committee, and it was now seconded and declared carried. A division having been called for, the motion was found to have been carried by a vote of 103 to 34.

On motion the Committee rose, reported progress, and asked leave to sit again October 18th.

On motion of Dr. H. G. Piffard, the Committee's request was granted.

The President then took the chair.

Dr. Flint, Jr., moved that the amendments lie over until the next meeting, under the rules. Carried.

The meeting then adjourned.

As the matter stands, the amendments are now in the hands of the Committee of the Whole, and no motion in regard to them, or action on them, can be taken by the Academy until the final report of this Committee.

It now seems nearly certain that so large a number of supporters of the old code feel it necessary to save the Academy, that the amendments will secure the requisite three-fourths vote.

We should think it not at all improbable that all opposition to the amendments may be abandoned in order to prevent the new code party from claiming a victory by the action of the Academy of Medicine. Weak, timid generals are very fearful of changing front during the time of battle. But Dr. Flint, Jr., does not belong to this class. Like Bismarck, he would not hesitate for a moment to give up a fight where he has nothing to gain and much to lose by victory.

The real battle on the "code" is to be fought at the County Medical Society, October 22d, where Dr. Flint, Jr., has frankly and squarely made the issue, and put at the head of his ticket the strongest man possible who would be sure of nearly an unanimous election, were it not that the election does not rest alone on the interests of the society and personal merits.

THE CLINICS OF NEW YORK CITY.

We present in another column a schedule of the clinics to be held in this city during the coming season. The total number per week is over one hundred and sixty, giving an average of about twenty-eight clinics each week-day.

The clinics in general medicine and surgery naturally take the lead in number, there being between twenty-five and thirty of each of these weekly. Eye and ear diseases, children's diseases, gynecology, neurology, come next in popularity.

Over two-thirds of the clinics have been established within the past year by the schools for post-graduate instruction.

New York has about forty public and private hospitals, with a capacity of over seven thousand beds. There are twenty-five dispensaries, treating a quarter of a million of people annually. There is, therefore, abundant material even for the numerous clinics.

ARTIFICIAL IMPREGNATION IN ITS MEDICO-LEGAL ASPECTS.

A case of much interest to the medical profession has recently been brought before the civil tribunal at Bordeaux. It appears that a certain physician in Bordeaux advertised widely that he was able to cure sterility in either sex, and no matter how obstinate. Attracted by these pretensions, M. and Mme. A., a childless couple, went to the quack and secured his services. The operation known as artificial impregnation was performed, but, as the evidence shows, in a bungling and incomplete manner. Conception did not take place, but on the contrary, some local injury was done. Despite the failure the quack claimed his fee, which was the moderate sum of fifteen hundred francs, and accused the woman of having attempted abortion. The case was brought before the court, which not only refused to award the fee but condemned the operator and the operation.

The decision does not affect the legality of the opera-

tion itself, but the judge condemned it as being a procedure which was unnatural, and which might, if abused, be a source of danger to society.

Artificial impregnation is an operation which in certain cases may be justifiable, but which is generally resorted to with extreme caution by gynecologists. The practicability of artificial impregnation was first shown upon the lower animals by Spallanzani in 1782. Dehant and Sims, about twenty years ago began to attempt it upon human subjects. In fifty-five separate experiments upon six patients, Sims only succeeded once, and he has now abandoned the operation. Some French gynecologists still endorse it.

LATHYRISM.

Toward the end of the last century, Duverney called attention to the danger of eating wild vetches, and described a paralysis of the lower extremities caused thereby. Since that time several observers have described lathyrism, and in 1880 a paper was presented to the International Medical Congress by Dr. Brunelli, giving the histories of several cases of this affection. At the meeting of the Paris Academy of Medicine of July 7, 1883, Dr. Proust detailed a series of observations made by him in an epidemic of the disease occurring recently in Algeria. The first symptoms appeared suddenly after a cold and wet night, and resembled those of a transverse myelitis, viz., high fever, lumbar pains, formication and trembling, motor and sensory paralysis of the lower extremities and paralysis of the bladder. In time, these symptoms were succeeded by those of degeneration of the lateral columns. The patients presented a very characteristic appearance. Locomotion was difficult and only possible with the aid of a cane. There was rigidity of the lower extremities. The feet were in extension and adduction, it was impossible to bring the heel to the ground and walking was accomplished on tip-toe. The patellar tendon reflex was greatly exaggerated and the ankle clonus was also marked. The eyes were unaffected and there were no lightning pains nor any other signs of ataxia.

No autopsies were made, but from the symptoms observed it is probable that the lesion consisted in a transverse myelitis or a hemorrhage of the cord, succeeded by degeneration of the lateral columns. The disease was apparently caused by a species of wild vetch (*lathyrus cicera*), called by the Arabs djilbes, which enters largely into the diet of the natives. All who were attacked had eaten of this vegetable, while among the tribes who did not use it there was not a single case.

The immediate exciting cause seemed to be exposure to cold, and moisture. M. Proust suggested that the injurious effects of the vetch might be due to a mildew. The disease would then be analogous to pellagra, the supposed cause of which is the *sporisorium maidis*, a parasite of Indian corn. Repeated examination, however, failed to show any diseased condition of the djilbes, while experiments upon animals would seem to demonstrate that the poison exists in the healthy plant. A resinous substance contained in the grain of the lathyrus caused death with paralytic phenomena when given to rabbits. The same paralytic phenomena were observed by Bourlier in animals poisoned by the ethereal or alcoholic extract of lathyrus. The prognosis was generally favorable. In some cases a spontaneous cure was observed, while in others it was obtained as a result of treatment. This consisted in the administration of iodide of potassium internally and counter-irritation with croton oil or tincture of iodine applied along the spine. This report suggests the advisability of a careful study of the physiological action and properties of lathyrus. We may then possibly find that a potent drug can be added to the neurologist's armamentarium.

News of the Week.

A Successful Resection of the Pylorus for cancer was recently made by Professor Heinecke, of Erlangen.

The New Medical College at Quincy.—A correspondent of the *Peoria Medical Monthly*, announcing the organization of a new medical college at Quincy, Ill., states that the Decatur physicians are not going to be behind-hand, and will presently organize a rival institution. The writer says that the following will go into the prospectus: "For some time we have been convinced that the obstacles thrown around the pathway to the medical profession by designing men are altogether too numerous, and it shall be our endeavor to do what we can to fill the decimated ranks of the profession, and in this way help to hold up the hands, enlarge the sphere of usefulness, etc., of those who have already chosen this noble profession. We believe it cannot be successfully controverted that where members of our profession are most numerous, there the health of the community is in the best state of preservation. This being an undisputed fact, we shall labor for the good of mankind by so decreasing mortality, in filling the ranks of our profession, until we may see in every city and hamlet throughout this glorious republic of ours, one physician to every one hundred inhabitants."

A New Medical College in Cincinnati has been organized under the title of The Medical University of Ohio.

Concerning Reported Leprosy in Wisconsin.—We have received a communication from Dr. J. T. Reeve, Secretary of the Wisconsin State Board of Health, regarding a remark made in a recent editorial that leprosy was "said to prevail to a considerable extent in some of the Scandinavian colonies in Wisconsin." This report, Dr. Reeve states, is unfounded. He thinks it doubtful if there is at present a single case of the disease in the State. A few cases of leprosy have been brought into Wisconsin by immigrants from Norway, but not one case, as far as can be ascertained by the most careful inquiry, has ever originated there, and the disease can never be said to have "prevailed to any considerable extent."

The Epidemic at the New York Infant Asylum, Mount Vernon, N. Y., and the Cause of the Excessive Death-rate.—Dr. B. J. Burnett, Health Officer of East Chester, N. Y., submits the following facts in reference to the rate of mortality at the Mount Vernon branch of the New York Infant Asylum: "An epidemic unquestionably has invaded the above institution, the nature of which is more a matter of conjecture than ac-

tual knowledge, I opine, on the part of those who *ought* to possess definite and accurate opinions, in control of this institution. On the first day of August last there were contained in the above asylum 236 *children*. During August there were 23 *deaths*, and during September 33 died, a very heavy percentage you perceive. From the death certificates in my possession it would be a difficult matter to ascribe this excessive rate of mortality to any particular disease, as each of the certificates referred to specify from *two* to *five* causes of death under head of chief or determining, and from *one* to *three* of consecutive or contributing causes." This is a serious charge from a responsible source, which, we hope, can be satisfactorily explained by the asylum authorities.

YELLOW FEVER AT HAVANA AND VERA CRUZ.—During the week ending September 28th there were nine deaths from yellow fever at Havana. There were eight deaths from yellow fever at Vera Cruz during the week ending September 20th.

THE FOOD VALUE OF AMERICAN FISH.—Spencer F. Baird, Commissioner of Fish and Fisheries of the United States, in noting the editorial in THE MEDICAL RECORD for September 29th, urging the taking of steps for investigating the food value of American fish says, that this subject has occupied the attention of the Fish Commission for several years; and that since 1878 Professor W. O. Atwater, of Middletown, Conn., has been carrying on, practically, at its expense, a series of researches far exceeding in magnitude, and scientific as well as economical value, any others on the same subject. Professor Atwater is now in Germany, engaged principally in this work, which is still very far from being completed. He has, however, made several partial reports, one of which was published in the "Proceedings of the American Fish Cultural Association for 1882." A more elaborate report, containing the fullest possible data in regard to about sixty-two species of American fishes, is now in type, and will appear in a forthcoming volume of United States Fish Commission reports.

DEATH OF A MEMBER OF THE FRENCH CHOLERA COMMISSION.—M. Thuillier, one of the scientists sent under the direction of Pasteur to study the cholera in Egypt, has himself fallen a victim to the disease. He was the youngest member of the party, being but twenty-six years of age. He contracted the disease in the cholera hospital of Ghedid, in Alexandria, where he was engaged in its study. His funeral was attended by all the Europeans resident in the city, the consuls, the medical corps, members of the other cholera missions, and the English army surgeons.

THE MEDICO-LEGAL SOCIETY held its stated meeting on October 3d. Prof. John J. Reese read a paper entitled "Report of a Toxicological Examination for Arsenic." Mr. Charles F. Wingate read a paper entitled "Sanitary Laws relating to Building in New York."

THE PHILADELPHIA MEDICAL TIMES.—The editorship of this journal has been changed, and Dr. Frank Woodbury has been promoted to the position. We congratulate the publishers on having secured the services of so accomplished and experienced a gentleman.

Obituary.

SURGEON-GENERAL CHARLES H. CRANE, UNITED STATES ARMY.

BRIGADIER-GENERAL CHARLES H. CRANE, Surgeon-General, United States Army, after a brief service of one year and two months, died suddenly at 6 A.M., October 10th, at Washington, in his fifty-eighth year. His predecessor, Surgeon-General Barnes, was retired under the act of the Forty-seventh Congress in August, 1882, and lived but a short time after his retirement. Surgeon-General Crane was President Arthur's personal choice, and his death, so wholly unexpected, was a great shock to him. A few weeks ago he complained of a severe cold, which irritated his throat and made respiration irksome. He went about performing his official duties until two weeks since, when, under the advice of his physicians, he remained at home. Two days before his death the symptoms became alarming, though it was not supposed the patient was beyond the reach of medical skill. Several of the eminent surgeons of the army were in constant attendance, and though no attempt was made to conceal his condition from the family or the public, the fatal result of the throat hemorrhage was a shock to official circles in Washington. Both Surgeons-General Barnes and Crane were attendants at the bedside of President Lincoln, and in the pictures extant of his last moments it is Surgeon Barnes who is feeling the pulse of the dying President. He was born in Rhode Island, but was appointed to the army from Massachusetts on February 14, 1848. After several promotions he was, on March 13, 1865, made Brevet Brigadier-General for meritorious services during the war of the rebellion, and on July 28, 1866, was promoted to be Colonel and Assistant Surgeon-General, and afterward Brigadier-General and Surgeon-General, July 3, 1882.

His remains were interred at Shelter Island, N. Y., yesterday afternoon, the following distinguished gentlemen being pall-bearers: Secretary Lincoln, General Sherman, Admiral Rodgers, Robert C. Schenck, Generals McFeely, Rochester, Rucker, Drum, Beard, Benet, Hunter, Holabird, Wright, and Perry, Commodore Fillebrown, Dr. J. M. Brown, United States Navy; Mr. Ross Ray, and Mr. Charles Knapp.

Reports of Societies.

THE AMERICAN ACADEMY OF MEDICINE.

Eighth Annual Meeting, held in New York, October 9 and 10, 1883.

H. O. MARCY, M.D., PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE meeting was called to order by the President on Tuesday afternoon. A number of members from Philadelphia, Washington, Boston, and elsewhere were present, the whole number of registrations being forty-seven. The entire afternoon was devoted to reading papers, having as their general aim the encouragement of a higher and broader medical education. An exception was that of an interesting sketch of the late

DR. GEORGE M. BEARD,

by DR. A. D. ROCKWELL. The paper, which is published in full on page 399 of THE RECORD, described Dr. Beard's studious habits, his sense of humor, his vigorous self-assertion, his literary industry, and his tolerance of others, even the humblest and most illiterate.

DR. TRAILL GREEN, of Easton, Pennsylvania, read a paper on

THE IMPERFECTION OF TECHNICAL STUDIES AS A MEANS OF MENTAL CULTURE.

His theory was that technical studies might give special skill, the skill of the craftsman, but that they did not and

never could really educate a man in the broad sense of the word. Technical studies, perhaps, fitted a man for money-winning in many directions, but did not equip the man best for the needs of a learned profession.

Dr. Charles McIntire, Jr., of Easton, Pa., read a paper entitled

IS IT FAIR? A STUDY OF THE COMPARATIVE POLITICAL POSITION OF THE MEDICAL PROFESSION IN THE UNITED STATES.

Dr. McIntire showed how full the profession was of ignorant and incompetent persons, also how politically powerless and apathetic its members were. He inveighed against the indifference which both the public and physicians showed in allowing the country to be so flooded with persons who were really dangerous to human life and morality.

Dr. Benjamin Lee, of Philadelphia, read a paper entitled

THE VALUE OF AN ACQUAINTANCE WITH BOTANY AS A PRELIMINARY TO THE STUDY OF MEDICINE.

He deprecated the neglect into which the study of botany had fallen among physicians and medical students. The result had been caused by a narrow ultilitarianism, which made exhibitors and prescribers of drugs rather than enlightened physicians. The paper gave a historical review of the progress of botanical study in this country during the closing years of the eighteenth century and down to the present day.

Dr. A. L. Gihon, U.S.N., read a paper entitled

THE HIGHER PLANE IN MEDICINE.

A standard of preliminary education that will go far enough to embrace a knowledge of the natural sciences, and of the structure and use of language; a graded curriculum of four years; a rigorous examination for graduation by disinterested boards; a three-years baccalaureate probationary to the doctor's degree. All these are not enough, if preceptors, professors, and physicians in general fail to impress upon their pupils that medicine is something more than an *art*, merely seeking to relieve individual suffering at so much a head; that its wider aim is to banish disease from the earth, prolong life, develop and improve the race, and thus increase the total of human happiness; that there is no grander or sublimer employment of the intellect than this study of man and his surroundings, catenated as it is with every other branch of knowledge; that he who is really "learned in medicine" is learned in many things, and moves in that higher plane which should be the aspiration of every man who presumes to add M.D. to his name.

For those who are content to look no higher than the requirements of a daily routine, it were better to make no pretence of education, but to recognize a class of general practitioners who can pull a tooth, apply a poultice, or chance a dose of calomel or castor-oil. Consign them to the *limbus fatuorum*, but do not claim for them equality and fraternity with educated physicians. The line must be sharply drawn. There can be no border land. If the degree of M.D. is to be presumptive evidence of professional ability, see that it is the exponent of something definite. Repudiate sham colleges and sciolist teachers, and relieve the profession from the burthen of the gross ignorance, illiteracy, and incompetence which are now its opprobria.

Evening Session.

The President, Dr. H. O. Marcy, delivered his

ANNUAL ADDRESS.

The progress of modern thought was touched upon, and the query made whether medicine had progressed at an equal rate with other sciences.

The value of sanitation and the necessity of more earnestly studying and applying its laws was urged. The impurities of the air were enumerated, and the dangers encountered in badly ventilated rooms described. The organic dust in the air was believed to be the cause of the mysterious "epidemic constitution," so-called, and to be connected with the spread of disease and of surgical complications.

The impurities of water were described, and the consideration of soil-pollution in water-supply dwelt upon.

Numerous diseases are caused and distributed by impure water. The soil air was also a source of danger little considered. The power of these soil and water impurities has been shown by the disastrous effects of typhoid fever in Massachusetts. From 1840 to 1880 there were 390,000 cases of typhoid fever, with 40,000 deaths. In the war there were 93,433 deaths from injuries, and 186,216 deaths from disease. Of these latter deaths, 108,666 were from zymotic diseases alone. Besides this there were 1,700,000 cases of diarrhœa and 1,100,000 cases of dysentery. The number of deaths in 1880 in the United States from diphtheria was 38,398; from typhoid fever, 22,905.

The speaker had made some special experiments with germicides, and had reached conclusions much like those of Koch and Sternberg. Corrosive sublimate in a strength of 1 to 2,000 was as powerful as carbolic acid in a 1 to 20 solution.

The discoveries of Koch regarding the tuberculous bacillus, and its specific relation to phthisis, were thought by the speaker to be established. Some conclusions regarding the bacillus were given.

The disposal of the dead was a problem that needed attention.

The prospective development of the medical profession and of medical science were eloquently dwelt upon.

At the close of the address numerous micro-photographs of the lower organisms were shown.

The Society then adjourned to a supper.

Second Day—Wednesday, October 10th.

A telegram was received announcing the fatal illness of Dr. F. D. Lente.

ELECTION OF OFFICERS.

The Council reported the following nominations for officers:

President—Dr. Benjamin Lee, of Philadelphia; *Vice-Presidents*—Dr. Nathan Allen, of Massachusetts; Dr. A. L. Gihon, U.S.N.; Dr. George F. Shrady, New York; Dr. Edward J. Berminghani, New York; *Secretary and Treasurer*—Dr. Richard J. Dunglison, of Philadelphia; *Assistant Secretary*—Dr. Charles McIntire, Jr., of Easton, Pa.

The report of the Committee was accepted and the officers elected.

Dr. J. Marion Sims was elected honorary member. Twenty-six new Fellows were elected.

Dr. L. S. Pilcher, of Brooklyn, delivered an address on

THE RELATIONS OF MEDICAL JOURNALISM TO HIGHER MEDICAL EDUCATION IN AMERICA.

Dr. Pilcher began by deprecating the somewhat too radical conclusions announced in some of the papers on the day before, regarding the absolute necessity of an academic training in order to be a useful physician. It would not be to the advantage of the Academy to have such an opinion go out as representing its views. The speaker instanced Hunter, Cooper, Paré, and Velpeau, as persons who had brilliantly succeeded as physicians despite their having been without a classical training. The speaker also protested against the slurring manner in which the *art* of medicine had been spoken of in comparison with the *science*. Harvey had been instanced as an example of what education, learning, originality, and skill could accomplish. Harvey, however, was unskilful in the art of medicine, while his contemporary, Sydenham, not a scientific man, was a brilliant *physician*.

"There is now," the speaker continued, "a revolu-

tion going on in the methods of medical teaching. The use of technical appliances, laboratory teaching, quizzing, etc., are now a part of the teaching system, so that now the average medical graduate is crammed to an extent which was not the case twenty-five years ago. It is a question, however, whether he is any better physician than he was formerly. The function and object of medical education was to make real practical physicians, those who could relieve pain and cure disease. That system of education which makes the best physicians in this sense will be the one finally adopted. Other things being equal, the person who has first had a good general education will have the advantage over others in the end."

The speaker was inclined to think that the increase of medical colleges was not an unmixed evil, owing to the effect of competition. The licensing of students by these colleges was, however, a mistake.

The speaker then took up the subject of medical journalism. The rapid growth of medical journalism was a sign of the increased education and mental activity of the profession. The fact that the great publishing houses were willing to put their capital into the large weeklies was an evidence of appreciation of the intelligence and educational ambition of the profession.

In the discussion of the paper, DR. STEINER said that in organizing the Academy the chief object was distinctly formulated. It was to encourage young men to secure a preliminary collegiate education before studying medicine. He protested against an attempt to discuss the primary object of the Association as a waste of time.

DR. HUNT, of Boston, speaking for outsiders, asserted that academic training was inconsequential and useless. He thought the real reform needed by the profession was closer adaptation to the methods of science.

DR. A. L. GIHON, referring to Dr. Pilcher's remarks, said that Hunter, Velpeau, and Cooper were not graduated in two years, but really had a long and careful preliminary education.

DR. SIBBETT spoke briefly, defending the aims of the Academy. The conditions of life and opportunities for education are very different now from those of a hundred years ago. Of eighty medical men in his county only three had the degree of A.B. Not five had ever contributed to medical science or literature, because they were not sufficiently educated.

DR. J. CHESTON MORRIS, of Philadelphia, read a paper entitled

THE MILK SUPPLY IN LARGE CITIES.

The importance of milk as a food, the dangers to infant life of its impurities, and the methods of delivering and of adulteration were enumerated.

The use of sealed jars for the delivery of milk was recommended.

There was a great difference in the quality of the milk of different kinds of cows. Thus the common native cow gives 1 pound of butter to 17 pounds of milk; the Devon, 1 pound of butter to 14 pounds of milk; Jersey, 1 pound of butter to 12 pounds of milk; Durham and Ayrshire, 1 pound of butter to 17 pounds of milk. The Devon cow contains more sugar and caseine, and its milk is more nutritious. The composition of milk was given. The total amount of milk annually consumed in Philadelphia was estimated to be 55,548,417 quarts, or about two-fifths of a pint daily to each inhabitant. The cost averaged $100,000 a day.

DR. A. D. ROCKWELL read a paper entitled

THE EXACT VALUE OF THE ELECTROLYTIC METHOD.

The writer said he had long ago given up the attempt to treat malignant tumors by electrolysis. In a case of epithelioma of the face, however, he had recently obtained an entire disappearance of the growth. In some cases of intramural fibroids he had had remarkably good success. An illustration case was cited. In erectile tumors he had had his best results. One operation is generally sufficient.

The best method of procedure was to connect the needles with the positive pole and place the negative pole outside. The resistance is greater, but this can be overcome by increasing the number of cells. Cystic tumors can be as successfully treated as the erectile, but practically the application is less often needed.

Dr. Rockwell's conclusions were:

First.—The success met with in the treatment of malignant tumors is generally but trivial. In epithelioma, however, when superficial and easily reached, success may be had.

Second.—The electrolysis of *intramural* fibroids often reduces the size somewhat and gives great relief.

Third.—For erectile and small cystic tumors electrolysis is a specific.

Fourth.—Goitres, if small and soft, may be reduced in size, even by external applications. Even when hard, electrolysis may be beneficial, but the results are variable.

Fifth.—Hairs can be permanently removed.

Sixth.—In many cases of stricture, relief or cure can be obtained by electrolysis, but experience is not sufficient to speak of its value positively.

THE REPORT OF THE COMMITTEE ON PROGRESS OF MEDICAL LEGISLATION

was read by DR. R. J. DUNGLISON. The report stated that the progress made in the past few years had been most satisfactory. The views of Dr. Miller, of Minnesota, were quoted, in which he stated that the laws of West Virginia, Illinois, Minnesota, and Missouri were the best. It was stated that considerable disappointment had been felt as to the success of the registration law in Pennsylvania and New York. The workings of the new law in Mississippi, modelled after the Illinois law, passed in 1882, had already been very successful. The attempts of the Illinois Health Board to promote higher medical education were detailed. A list of the States which possessed some medical laws was given as follows: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Texas, Vermont, Virginia, and Wyoming Territory.

Since the last meeting of the Academy laws had been passed in Delaware, Michigan, Minnesota, and Missouri. The efficacy of the laws in the different States varied greatly. The following States have *good* laws, according to Dr. Rauch: North Carolina, Alabama, West Virginia, Illinois, Missouri, Minnesota, New Mexico, Wyoming Territory, Mississippi, and Louisiana; ten in all. Pennsylvania still lags behind, her law being little more than a registration regulation. New York's law has been much criticised. It was still thought a good law in the main by many, but needed a severe penalty for perjury. In Alabama the diploma confers no right to practise. In Arizona, Pennsylvania, and Washington Territory, the law is simply for registration. In Arkansas a bill for a medical law failed last year. In Texas and Nebraska the law is weak and ineffective. In Tennessee there is no law, and the practice of medicine is "free to all." In Utah there is no medical law except that provision of the penal code which punishes a physician who is drunk.

DR. R. S. SUTTON, of Pittsburgh, read a paper on the "Importance of Cleanliness in Surgical Operations."

[The paper will appear in full in a subsequent number of THE RECORD.]

DR. BUSH read a paper entitled "A Few Words Concerning Vaccination."

At the close of the reading of the papers, the new President, DR. BENJAMIN LEE, was introduced.

The Academy then adjourned to meet next year in Baltimore, Md.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 12, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

THROMBOSIS WITHOUT EMBOLISM.

DR. VAN GIESON said that at the last meeting of the Society he presented a specimen of thrombosis occurring after parturition, and then expressed opinion that it was not due to embolism. [See MEDICAL RECORD, vol. xxiv., p. 246, September 1, 1883.] Since that time he had seen a case of very severe phlebitis, affecting both femorals, with apparent partial obstruction of the femoral arteries, at least the impulse of the arteries was very much diminished, occurring in a woman sixty-five years of age; at the present there is more or less coldness of the lower extremities without any distinct evidence of gangrene. Dr. Janeway had seen the patient, but his opinion concerning the case Dr. Van Gieson had not yet learned. He had, however, examined the heart very carefully, and, so far as physical signs go, found it entirely free from any evidence of valvular disease or hypertrophy. The occurrence of this case so soon after the one reported, and the absence of any evidence of cardiac lesions, still further inclined him to the belief already expressed, namely, that obstruction from thrombus is not necessarily due to embolism. In other words, there are cases of thrombus which occur independent of any mechanical obstruction by embolism; whether or not the change occurring in the intima of the affected vessel might be called inflammatory, he was unable to say.

DR. AMIDON asked if, in the last case, there was any evidence of the presence of the contracted kidney of Bright's disease?

DR. VAN GIESON replied that repeated examinations of the urine had failed to reveal any evidence of kidney disease.

DR. AMIDON said the reason he asked was because it is well known that, not only in syphilis, but in chronic interstitial nephritis, the condition of endarteritis obliterans occurs, and he was unable to see why it should not affect the femoral as well as the cerebral vessels. He had not, however, observed it in a peripheral artery of a limb.

DR. VAN GIESON said that he had not, except in the case referred to at the time he presented the specimen.

The Society then went into Executive Session.

Stated Meeting, September 26, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. GEORGE R. ELLIOTT presented a specimen of

SACCULATED ANEURISM OF THE ABDOMINAL AORTA,

accompanied by the following history: The points of interest were its occurrence in a person in whom the other organs were found in a healthy condition, the healthy appearance of the aorta above and below the aneurism, the small size of the tumor, and the absence of specific disease. Frederick M——, German, aged thirty-seven, married, and a cabinetmaker by occupation, was admitted into the New York Hospital, July 6, 1883. Family history bearing on the case was negative; alcoholic history was well marked; there was no evidence of syphilis. For eighteen months previous to admission he suffered from sudden attacks of pain in the left lumbar region, running down the course of the ureter to the testicle. These attacks varied from a few hours to several days in duration. Upon admission he was well nourished. Examination of the viscera, both thoracic and abdominal, revealed nothing abnormal; there was no marked abdominal pulsation, and no *bruit* could be heard; there was no abdominal tenderness upon palpation. For several days he continued to complain of pain above described, together with pain at times shooting down the course of the left sciatic nerve, and often also of vague pains referred to the bladder. He continued in that condition until early on the morning of July 23d, when after some slight exertion he suddenly went into a condition of collapse attended with evident signs of internal hemorrhage, and the simultaneous development of a tumor in the left iliac region. A hard tumor could be made out by palpation, and a hypodermic syringe was introduced and blood withdrawn.

At the autopsy, made six hours after death, the left ventricle of the heart was slightly hypertrophied; in other respects the organ was normal. The other organs of the body were found in a normal condition. Behind the peritoneum on the left side of the spinal column there was seen a large clot of blood extending from the diaphragm to the sacro-iliac junction and floating up the kidney, ureter, and intestines. At a point of the abdominal aorta, one-half inch above where the cœliac axis was given off, a sacculated aneurism was found. The sac measured three inches in its longer diameter and one and one-half inch in its shorter. The tumor was found resting upon the bodies of the last three dorsal vertebræ. At the posterior inferior part of the sac on the left side there was an opening one-half inch in diameter and the parts in immediate contact were lacerated. Upon section the cavity of the aneurismal tumor contained laminated fibrin and recent blood cōagula. The bodies of the tenth, eleventh, and twelfth dorsal vertebræ were found eroded but the intervertebral cartilages were quite intact.

DR. F. V. WHITE asked if the chronic alcoholism was regarded as a factor in the production of the aneurism.

DR. HEINEMAN said that alcoholism was one of the recognized causes of atheroma of the arteries.

DR. VAN GIESON said with regard to diagnosis that he had a somewhat similar case, in which there was found after death a small aneurismal tumor at the upper portion of the abdominal aorta with slight erosion of the vertebra, and the only symptom during life was a dull, heavy pain below the umbilicus that had continued for a number of months. No diagnosis had been made, although the man had been seen by several eminent physicians, and he died almost instantly. The practical point is this: when there is obscure abdominal pain, shooting through to the back, extending down the course of the ureter, and, after careful examination, all other causes can be excluded, and the patient has a history of syphilis, there is very strong presumptive evidence of aneurism. At least he had seen one such case, and made the diagnosis of probable aneurism, and, although the patient passed from his observation, Dr. Van Gieson learned subsequently that he died of aneurism.

DR. VAN SANTVOORD thought the apparently normal condition of all the other viscera would exclude alcoholism as a cause, and suggested that some local pressure from the patient's occupation would be a more probable cause.

INFARCTION AND ABSCESS OF THE SPLEEN.

DR. HEINEMAN presented a spleen which had been the seat of an old infarction, and had terminated in a large abscess—in a case of heart disease. The abscess was opened and the patient died two days later of progressive asthenia.

The patient was a male, aged twenty-one, native of Germany, single, and a waiter by occupation, who was admitted to the Mount Sinai Hospital, March 25, 1883. Family history was negative. Two years previous he had rheumatism, from which he recovered quite completely. Four months previous he was seized with pain in the left lumbar region, with pain and stiffness in both legs, most marked in the left, which continued acutely for three or four weeks. This subsided to a considerable extent, but the left lumbar pain returned with increased force three weeks ago, accompanied

by pain in the left chest. He has had no vomiting, but has suffered from thirst; his appetite has remained good. For the past fortnight he has urinated frequently and even had incontinence at times.

Upon admission, the patient was fairly nourished, had slight œdema of the left foot, pulse and respiration normal, appetite good. A loud systolic aortic and mitral murmur with a slight presystolic murmur and cardiac hypertrophy is recognized. Urine subsequently contained blood at times, but always continued to contain pus and mucus in varying amounts. The frequency of micturition continued at times. In May (two months after admission) hyaline and slightly granular casts were found, albumen was present at all times in varying amounts. The quantity of urine was at all times considerable.

After admission, the evening temperature was always slightly elevated, usually rising to 101°, and occasionally rising to 103° and even 104°. His pain in the left lumbar region continued after admission constantly, varying in amount, and gradually a fulness with tenderness upon pressure was developed over this region. Two months after admission he had distinct chills followed by febrile movement and sweating for several days. Five months after admission distinct enlargement of the spleen was apparent. Later fluctuation was recognized over the left lumbar region. Perinephritic abscess was suspected, but operation was for unavoidable reasons deferred until a month later, when an incision was made by Dr. Gerster over the lumbar region and an abscess cavity opened from which almost two quarts of bloody pus escaped. Microscopic examination showed the fluid to contain broken-down pus-globules and small broken-down round cells.

The patient, who was extremely emaciated and debilitated at the time of the operation, recovered from the immediate effects, and appeared in many ways more comfortable, but continued to fail rapidly and died September 14th, six months after admission to the hospital, and probably ten months after the beginning of his local trouble. Upon autopsy the following condition was found: Lungs, stomach, and intestines were normal. Heart dilated and hypertrophied, with large firm old vegetations upon the aortic valves, stenosis of the aortic orifice; thickening and stenosis of the mitral orifice. Liver was congested and nutmeg in appearance. Kidneys were of normal size, capsule not adherent, surface smooth and mottled, striations lost, and left kidney contained a few old decolorized infarctions. Bladder mucous membrane was inflamed and coated with pus and fibrin in places. There was slight burrowing of pus behind the left mesocolon which was evidently recent. Spleen was enormously enlarged. A large old infarction was found close to the capsule, part of which, together with the neighboring splenic tissue, had broken down into an abscess in the centre of the enlarged organ, forming a cavity six inches long, four inches wide, with old thickened walls and containing some degenerated pus. The walls were formed by the thickened capsule and adhesions with neighboring connective tissue structures and above and below by the remaining splenic tissue. The pus cavity had not ruptured and presented only the artificial opening.

Dr. Heineman remarked that abscess of the spleen after infarction from cardiac disease was of not frequent occurrence, though met with occasionally. Dr. F. Delafield had personally communicated the recital of three or four cases, in one of which the whole spleen had broken down. All these cases had terminated by rupture and the resulting peritonitis. Concerning the result in the case related, the abscess would probably also have ruptured, if it had not been opened, and had it been possible to recognize the nature of the trouble early in the disease it is not improbable that the result of surgical interference would have been more successful.

PHTHISICAL LUNG WITH PERFORATION.

Dr. Heineman also presented a lung which was removed from a patient, who had been in the service of Dr. Alfred Meyer at the Mount Sinai Hospital. The patient was taken ill two months before his death with the symptoms of acute pulmonary tuberculosis, he died September 25th, yesterday, from perforation and resulting pneumothorax. The perforation had taken place probably twenty-four hours before death. The lung presented the lesion of pneumonic phthisis, with the usual bronchitis and peribronchitis and was studded with cheesy nodules; the upper lobe was completely broken down into a single large cavity and the perforation was in the walls of this cavity. The point of interest here was perforation taking place within two months from the onset of the disease.

Dr. Van Gieson said, concerning the remarks with regard to blood and pus in the urine in cystitis tending to mask the symptoms, and to some extent to justify the diagnosis of perinephritic abscess, that in perinephritic abscess, a disease difficult to diagnosticate under any circumstances, the presence of pus in the urine is one of the least of the symptoms, unless there is communication between the abscess and the kidney, which is a rare complication. He would be inclined to attach but little importance to this as a symptom in perinephritic abscess.

Dr. Heineman: So would I.

Dr. J. Lewis Smith said the case reminded him of an interesting one of perinephritic abscess which was finally relieved by operative measures. There was albuminuria for perhaps two or three weeks early in the sickness and afterward the urine became normal. The abscess made its way into the intestine, which fact obscured the diagnosis because the tenderness and fulness abated with the occurrence of the discharge.

UMBILICAL PHLEBITIS.

Dr. J. Lewis Smith presented a specimen removed from the body of an infant who died in the New York Infant Asylum, at the age of eight months. At birth it weighed eight pounds and six ounces, was plump and well developed, and the mother was healthy. When four or five days old it began to be feverish, one day the temperature rising to 104⅘° F. There was no outward appearance of inflammation of the umbilicus, and the navel healed readily. At the age of two weeks there appeared an abscess on the scalp, one upon the back, and another upon the nates. These abscesses remained and new ones appeared as long as the child lived, showing that it suffered from septicæmia. At the age of four weeks orchitis upon one side developed and continued for three weeks, when it resolved. When the child was two months old a tumor appeared half an inch above the umbilicus, and when it had continued for a week Dr. Parker opened it, and it discharged bile instead of pus. There was no cough, but at times diarrhœa occurred. This biliary fistula closed soon after it was opened, and after that the discharge of bile occurred from the umbilicus, which continued as long as the child lived. The autopsy was made by Dr. Welch, who reported as follows: Length of infant, twenty inches; very much emaciated. There were the remains of a number of old abscesses upon the trunk and extremities. On opening an abscess on the right side of the occipital bone it was found to contain four drachms of pus, and corresponded to a carious defect in the occipital bone, one inch in length and half an inch in breadth. The dura mater immediately beneath was thickened, but the pia mater was normal. There was a small opening at the umbilicus, with a yellow margin, through which a probe passed into a cavity. The skin about the opening was normal except a small cicatrix about the umbilicus. The heart was normal. The lower parts of the lungs were congested, as also were the spleen and kidneys, the supra-renal capsules and bladder. The tunica albuginea of the left testicle was thickened. The stomach and intestines were normal. The umbilical vein was dilated to about twice

its normal size, its walls were thickened, and it contained yellow, thickened bile. One of the branches of the vein could be traced into the liver, where it opened into an abscess about the size of a walnut containing thick pus, and through this abscess a communication had been established between the umbilical vein and the bile-ducts. The gall-bladder and the hepatic and cystic ducts contained bile and appeared normal, and the liver, except for the abscess, presented a normal appearance. The abscess was in the right lobe, near the posterior border and extended to the superior surface. The umbilical vein opened at the umbilicus, from which point the probe passed into the dilated vessel, but it contained no blood. The peritoneum was normal, as also were the brain and spinal cord.

Dr. Smith regarded the case as a rare one. He had not seen a biliary fistula like this, and it had interested him that undoubted umbilical phlebitis may occur. Thrombosis occurs not infrequently with softening of the material and the formation of a fluid that presents the gross appearance of pus. Such a specimen he had presented to the Society within a year. But here there was a true umbilical phlebitis, because the walls were thickened and distended to the surface of the vein, and exhibited the appearance of an inflammatory process; while at the end of one of the branches was an abscess in the liver which established a communication between the liver and the umbilical vein, through which bile escaped.

Dr. Van Gieson asked if it was not unusual for a child to live for this length of time with secondary lesions arising from umbilical phlebitis.

Dr. Smith said he had not met with a sufficient number of cases to enable him to answer the question.

Dr. Ferguson said that some time ago he made an autopsy on the body of a child eight or nine years of age, who had been vaccinated two years previous to death. Three months after the vaccination a rash broke out over the entire surface of the body and three months subsequent to that the child complained of pains in the bones, and later on of intense pain in the head, and six weeks before admission to the hospital it was noticed that she was incapable of performing certain movements, and markedly that she was unable to move her head without moving her entire body. Shortly before admission she fell down stairs, remained in the position in which she fell, was taken up and put upon a bed, when it was found that she was only semi-conscious. After a time she gained consciousness and was removed to the hospital, and died at the end of eight or nine days. At the autopsy he found several open sores communicating with the bone beneath. On removing the brain it was found that the odontoid process projected into the foramen magnum, the ligament which was extensively diseased having broken, and had partially crushed the pons. The point of interest in the case was not so much the communication of the abscess with bones as the existence of tubercle bacilli in very large numbers, not only in the abscesses but in the bones beneath them, and in one or two isolated tubercles of the brain. One of the queries in the case was, How much did the vaccination have to do with the final condition?

The Society then went into executive session.

The Therapy of Spasmus Nictitans.—Under this head Dr. Friedr. Betz relates the history of a boy, fourteen years of age, who had suffered for several years from a bilateral nictitating spasm of the lids. Several physicians had attempted to relieve him, but in vain. The boy was healthy, and his eyesight good. He had, however, quite long eyelashes and the edges of the lids were reddened. Betz performed epilation of numerous lashes above and below on both eyes. The result was immediately successful.—*Memorabilien*, August, 1883.

Reviews and Notices.

An Encyclopædic Index of Medicine and Surgery. Edited by Edward J. Bermingham, A.M., M.D. 8vo, pp. 934. New York: Bermingham & Co. 1882.

The plan of this book, as set forth in the preface, is excellent. The intention, as there stated, was to furnish a work that should give a comprehensive account of every disease, its etiology, symptoms, diagnosis, prognosis, and treatment, and which at the same time should consist of but one volume, thus greatly facilitating a ready reference. An account of nearly every disease known is there met with, though the cross references are not as numerous as they should be. Such common terms, for example, as Dupuytren's contraction, Menière's disease, Pott's disease, scoliosis, otitis, trichinosis, osteomalacia, trismus, and others, are not to be found. The several conditions are treated of under other headings, it is true, but in a work of this nature it is annoying to be obliged to think of all the synonyms of a disease before finding the subject wanted. Then, again, we were greatly disappointed in the articles. We had supposed that they were original articles, prepared especially for this work by the authors whose names appear in the list of contributors. But this is not the case. Some, indeed, appear to have been written expressly for this or some similar publication, but others, and among them some of the most important, are taken bodily from other sources. The articles on "Milk Fever," "Puerperal Convulsions," and "Puerperal Insanity," for example, are found word for word in the second American edition of Playfair's "Midwifery." The article on "Perityphlitis," by Dr. H. B. Sands, is an exact reprint of a lecture delivered by him before the Anatomical and Surgical Sotiety of Brooklyn, on May 31, 1880, and published in the *Annals* for July of that year. The article on "Pneumonia" is in the form of a lecture and will have a charmingly familiar sound to those old students of the College of Physicians and Surgeons whose good fortune it was to listen to Professor Alonzo Clark. The articles are uneven, and do not bear the marks of careful editing. Nearly twenty pages are devoted to "Infantile Paralysis," while "Diseases of the Liver," are treated of in nine pages, and "Typhoid Fever" is disposed of in less than two. Of course, when there are so many different writers there must be a difference in style, but it need not be so marked as we find it here. The articles on surgical subjects written by Mr. C. B. Keetley are painfully jerky, and read very like notes jotted down by a lecturer whose memory needs to be refreshed from time to time. A succession of sentences of two and three words each is apt to weary the reader even of a condensed encyclopædia, and when the entire sentence consists of one word the shock is severe. Notwithstanding these faults of editing and compilation, there are many excellent articles to be found here, and the work is really valuable as a handy book of reference in hurried moments.

The Roller Bandage. By William Barta Hopkins, M.D., etc. With 73 illustrations. 12mo, pp. 95. Philadelphia: J. B. Lippincott & Co. 1883.

Dr. Hopkins's little work on the roller bandage is a clear account of the various applications of that bandage to the different parts of the body, but illustrated by the most hideous drawings that can be imagined. This, however, is the fault of the book-maker. Dr. Barton has done his work well and deserves to have had better fortune with his cuts.

Sexual Impotence in the Male. By William A. Hammond, M.D. New York: Bermingham & Co. 1883.

This work of 274 pages is divided into four chapters, entitled, "Absence of Sexual Desire," "Absence of the

Power of Erection and of Consequent Intromission," "Absence of the Power of Ejaculating the Seminal Fluid into the Vagina," and "Absence of the Ability to Experience Pleasure during the Act of Copulation and during the Emission of the Semen." Each of these topics is fully described and illustrated by cases drawn from the author's experience or cited from authorities, and each chapter is accompanied with therapeutic suggestions for the relief of the conditions described. Much space is given to the recital of instances of perverted sexual feelings and acts which in their results so frequently if not commonly lead to the induction of ultimate impotence. The literary style of the book is admirable, its information is instructive, and its external appearance is attractive.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from September 29 to October 6, 1883.

TILTON, H. R., Major and Surgeon. Assigned to duty as Post Surgeon at Fort Wayne, Michigan. S. O. 183, par. 4, Department of the East, September 28, 1883.

BRECHEMIN, LOUIS, Captain and Assistant Surgeon. Relieved from duty at Fort Columbus, N. Y. H., and assigned to duty at Fort Wadsworth, N. Y. S. O. 183, par. 5, Department of the East, September 28, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 6, 1883.

BEARDSLEY, G. S., Surgeon. Granted leave of absence for six months, with permission to leave the United States.

AUSTIN, A. A., Passed Assistant Surgeon. Orders to Naval Hospital, New York, revoked, and placed on waiting orders.

LIPPINCOTT, GEORGE C., Passed Assistant Surgeon. Ordered to the Naval Hospital, New York.

PECK, GEORGE, Medical Director. Detached from the Naval Hospital, Mare Island, Cal., and placed on waiting orders.

MCMURTRIE, D., Surgeon. Ordered to report at Washington, D. C., October 3d, for Medical Survey.

CRAWFORD, M. H., Passed Assistant Surgeon. Ordered to report at Washington, D. C., October 3d, for Medical Survey.

DUBOIS, F. L., Surgeon. Detached from Naval Rendezvous, Philadelphia, and ordered as member of the Medical Examining Board, Philadelphia.

RUSH, CHARLES W., Passed Assistant Surgeon. Detached from the Naval Hospital, New York, and ordered to the Receiving Ship Colorado, New York.

JONES, M. D., Passed Assistant Surgeon. Detached from the Naval Hospital, Washington, D. C., and ordered to the Naval Hospital, New York.

ASHBRIDGE, RICHARD, Passed Assistant Surgeon. Detached from the Naval Academy, and ordered to the U. S. S. Swatara.

APHASIA AT THE COMMENCEMENT OF TUBERCULAR MENINGITIS.—Dr. Schutz relates the case of a man with fungoid arthritis of the elbow, who was suddenly seized with aphasia without any other paralytic symptoms. He could read and write, but was unable to pronounce a word, even if it was spoken before him. Soon other symptoms appeared, cephalalgia, facial paralysis, and periods of excitement followed by depression; then deafness, pain in the neck, strabismus, and dilatation of the pupils, followed by coma and death. The autopsy revealed tubercular meningitis. Aphasia has usually been regarded as a late, rather than an early symptom of this disease. —*L'Abeille Médicale*, September 10, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 9, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 2, 1883.....	0	86	26	2	11	41	0	0
October 9, 1883.....	0	74	42	8	10	29	0	0
Deaths.								
October 2, 1883.....	0	11	8	3	4	16	0	0
October 9, 1883.....	0	25	2	6	5	14	0	0

SCHEDULE OF THE VARIOUS CLINICS TO BE HELD IN NEW YORK CITY THE COMING SEASON.

CLINICS IN GENERAL MEDICINE.

Monday: 11 A.M., Post-Graduate School and Bellevue Hospital; 2 P.M., New York Polyclinic; 2.30 P.M., New York Hospital; 5 P.M., Post-Graduate School.

Tuesday: 11 A.M., Post-Graduate School; 11 A.M., University Medical College; 10. A.M., Bellevue Hospital; 1.30 P.M., Bellevue Medical College; 1.30 P.M., Bellevue Hospital; 2 P.M., New York Polyclinic; 3 P.M., Bellevue Hospital.

Wednesday: 11 A.M., Woman's Medical College; 11 A.M., University Medical College; 2 P.M., New York Polyclinic; 5 P.M., Post-Graduate School.

Thursday: 10 A.M., Bellevue Medical College; 11 A.M., Post-Graduate Medical School; 12 M., College of Physicians and Surgeons; 2 P.M., Polyclinic; 2.30 P.M., New York Hospital; 5 P.M., Post-Graduate School.

Friday: 1.30 P.M., Bellevue Hospital; 2 P.M., University Medical College; 2 P.M., Polyclinic; 5 P.M., Post-Graduate School.

Saturday: 11 A.M., Post-Graduate School; 11 A.M., Bellevue Hospital; 2 P.M., Polyclinic.

GYNECOLOGICAL CLINICS.

Monday: 9 A.M., New York Polyclinic; 1 P.M., Post-Graduate School; 2 P.M., Woman's Hospital; 3 P.M., Polyclinic.

Tuesday: 9 A.M. and 3 P.M., Polyclinic.

Wednesday: 9 A.M., Polyclinic; 9 A.M., Woman's Medical College; 11 A.M., Post-Graduate School; 1 P.M., Post-Graduate School; 3 P.M., Polyclinic.

Thursday: 9 A.M., Polyclinic; 1.30 P.M., Bellevue Hospital; 3 P.M., Polyclinic.

Friday: 9 A.M., Polyclinic; 11 A.M., Woman's Medical College; 1 P.M., Post-Graduate School: 3 P.M., College of Physicians and Surgeons; 3 P.M., Polyclinic.

Saturday: 9 A.M., Polyclinic; 3 P.M., Woman's Hospital; 3 P.M., Polyclinic.

SURGICAL CLINICS.

Monday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 12 M., College of Physicians and Surgeons; 2 P.M., Bellevue Hospital.

Tuesday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 2.30 P.M., Roosevelt Hospital.

Wednesday: 10 A.M., Bellevue College; 11 A.M., Polyclinic; 12 M., Post-Graduate School; 1.30 P.M., Bellevue Hospital; 2 P.M., University Medical College; 2.30 P.M., College of Physicians and Surgeons; 3 P.M., Presbyterian Hospital.

Thursday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 2 P.M., New York Hospital; 2.30 P.M., Bellevue Hospital.

Friday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 3 P.M., Bellevue Hospital.

Saturday: 11 A.M., Polyclinic; 12 M., Post-Graduate School; 12 M., Woman's Medical Hospital; 12 M., University Medical College; 1.30 P.M., Bellevue Hospital; 2.30 P.M., New York Hospital; 2.30 P.M., Presbyterian Hospital.

EYE AND EAR CLINICS.

Monday: 1.30 P.M., Bellevue Medical Hospital; 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate Medical School.

Tuesday: 1 P.M., Post-Graduate School; 2.30 P.M., Post-Graduate School; 2 P.M., University Medical College; 2 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons.

Wednesday: 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 3 P.M., New York Eye and Ear Infirmary; 4 P.M., Post-Graduate School.

Thursday: 1 P.M., Post-Graduate School; 2 P.M., Polyclinic; 2.30 P.M., Post-Graduate School.

Friday: 2 P.M., Polyclinic; 2.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Saturday: 1 P.M., Post-Graduate School; 2 P.M., Polyclinic; 2.30 P.M., Post-Graduate School; 2 P.M., Woman's Medical College.

CLINICS FOR NERVOUS AND MENTAL DISEASES.

Monday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School.

Tuesday: 1 P.M., Polyclinic; 1.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Wednesday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School; 4 P.M., Manhattan Eye and Ear Hospital.

Thursday: 1 P.M., Polyclinic; 2 P.M., University Medical College; 1.30 P.M., Manhattan Eye and Ear Hospital; 4 P.M., Post-Graduate School.

Friday: 1 P.M., Polyclinic; 4 P.M., Post-Graduate School; 4 P.M., Woman's Medical College.

Saturday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons; 4 P.M., Post-Graduate School.

CLINICS FOR DISEASES OF CHILDREN.

Monday: 10 A.M., Post Graduate School; 10 A.M., Polyclinic; 1.30 P.M., Bellevue Medical College; 2.30 P.M., Bellevue Hospital.

Tuesday: 10 A.M., Post-Graduate School and Polyclinic; 3 P.M., New York Hospital (out-door department); 5 P.M., Post-Graduate School.

Wednesday: 10 A.M., Post-Graduate School and Polyclinic; 1.30 P.M., College of Physicians and Surgeons.

Thursday: 10 A.M., Post-Graduate School, Polyclinic, and University Medical College; 11 A.M., Woman's Medical College.

Friday: 10 A.M., Post-Graduate School and Polyclinic; 2 P.M., New York Hospital (out-door department).

Saturday: 10 A.M., Post-Graduate School and Polyclinic; 5 P.M., Post-Graduate School.

CLINICS FOR SKIN AND VENEREAL DISEASES.

Monday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons (skin).

Tuesday: 1 P.M., Polyclinic; 5 P.M., Post-Graduate School (skin); 7 P.M., Post-Graduate School (venereal).

Wednesday: 1 P.M., Polyclinic; 1.30 P.M., Charity Hospital (venereal).

Thursday: 1 P.M., Polyclinic; 3 P.M., College of Physicians and Surgeons (genito-urinary); 5 P.M., Post-Graduate School (skin); 7 P.M., Post-Graduate School (venereal).

Friday: 1 P.M., Polyclinic.

Saturday: 1 P.M., Polyclinic; 5 P.M., Post-Graduate School (skin).

CLINICS FOR DISEASES OF THROAT AND NOSE.

Daily: 2.30 P.M., Post-Graduate School; 4 P.M., Polyclinic.

Tuesday: 2 P.M., College of Physicians and Surgeons.

THE CIRCULAR LETTER TO THE FELLOWS OF THE NEW YORK ACADEMY OF MEDICINE CONCERNING PROPOSED AMENDMENTS IN THE CONSTITUTION AND BY-LAWS OF THAT BODY.—Dear Doctor: I assume that every Fellow of the New York Academy of Medicine must regard it as a most unfortunate event that anything should occur to interrupt its fraternal harmony, its useful work, and its progressive growth. While we cannot shut our eyes to the fact that this is the present condition of the Academy, it would be both useless and unwise to discuss the causes which have brought about this state of things, because, from their nature, they involve questions on which the most able, the most loyal, and the most conscientious men in the profession honestly differ. Let us accept this fact as inevitable, and that the Academy can do nothing which will effectively advance the interests of the profession by way of discussions, which irritate, but do not change convictions, or by arbitrary regulations, secured by shrewd tactics, but which carry no moral force. The Academy of Medicine is not fulfilling its mission when it is engaged in warm discussions of questions of casuistry, in polemical controversies, or in medical politics. The *Ephemeris* of Dr. Squibb quotes with approval an editorial from the *Boston Medical and Surgical Journal*, which contains the following sentence: "The lesson also is so obvious that he who runs may read, that the more our Societies confine themselves to their proper field—the joint cultivation of medical science and good-fellowship—and the less they meddle with medical politics, the better will it be for their own future and the common good of the profession." It seems to me that the truth of the above sentiment has been unfortunately, but clearly, demonstrated by our Academy of Medicine. The question which we have now to meet is: What measures can be taken to secure for the Academy a return of its prosperity? by which I mean a restoration of its fraternal harmony and good-fellowship; a renewal of its active scientific work; an increase of its funds for the growth of its library and the adequate support of its journal department. Since our last meeting this question must have occupied the minds of all our Fellows, who appreciate the importance of the Academy, which should represent the highest scientific work of the profession of this city. All must feel that the character of the profession and the grade of individual reputation is deeply involved in a wise settlement of this question. I trust that no one will suspect me of a wish to force my individual views upon the Academy, but that, in consideration of the experience which I have had in its affairs, each will understand the spirit in which I venture to offer a few suggestions to be discussed, amended, or improved at our first meeting in October. I do not feel it necessary to apologize for expressing the hope and the belief that every Fellow of the Academy who feels a proper sense of his personal responsibility, and what he owes to the profession and the public, will be present, and contribute by his voice or his vote to a satisfactory adjustment of our present difficulties. It must be obvious to all, that to attain this end we must make a new departure on certain questions, to which it is unnecessary to refer more definitely. There is an "irrepressible conflict" of views and opinions which cannot be settled by parliamentary tactics or a majority of votes, but must continue until in the progress of time the moral sentiment of the profession is crystallized in a public opinion which will have the force of law. No possible good can come from profitless and irritating discussions of these questions in the Academy of Medicine. It therefore seems to me of vital importance that now, in making a new departure, everything in relation to them should be buried in the past and forgotten. No unhappy dif-

ferences can be settled, no principle or cause can be advanced, no society or individual can be benefited by keeping up a galling wakefulness and feeding the living ulcer of a corroding memory of the past. The anodyne draught of oblivion is the first specific remedy for healing such ills as those under which the Academy is now suffering. The next point to be secured is such a change in our organic laws as to make it impossible that trouble and danger can ever again occur in the Academy. At our first meeting in October, certain amendments to the constitution and by-laws will be proposed for discussion, and at the following meeting they will be submitted to the vote of the Academy. Every change proposed has been the result of a most careful study of the subject, and has a distinct purpose which will be obvious to all. I think that it will be apparent that the whole intent of the proposed amendments is to make the Academy of Medicine a purely scientific society, independent of all other organizations; to place its standard of ethics on a higher plane than before; and to prevent the possibility of any future troubles by the introduction of matters foreign to its avowed objects. Respectfully submitting the above suggestions to your candid consideration, I remain, very sincerely yours, FORDYCE BARKER.

THE OTHER SIDE OF THE QUESTION, AS PRESENTED BY THE COUNCIL FOR UPHOLDING THE NATIONAL CODE.—Dear Doctor: The Council of the Organization for Upholding the National Code of Medical Ethics in the State of New York, begs to call your attention to a circular recently issued in which are proposed certain amendments to the constitution and by-laws of the New York Academy of Medicine. 'The Council cannot but regret the issuing of this circular as a covert movement, under a plea for harmony, in behalf of the organized effort in opposition to the National Code of Ethics. The proposed amendments, were they adopted, would eliminate from the constitution and by-laws everything relating to ethics, and surrender the Academy to those who advocate the abolition of all ethical codes. The Academy would thereby be deprived of the right of representation in the American Medical Association, and of affiliation with other medical organizations out of the State of New York. It may be assumed that there is no disposition on the part of those who are for upholding the National Code of Ethics to raise any discussion respecting the Code in the Academy. The Code has never been made a subject of discussion in the Academy by any one in favor of upholding it, and there is no ground for the supposition that it ever will be, unless it becomes necessary in the way of defence. The resolutions presented and adopted at the last meeting of the Academy had for their object the prevention of any future discussion relating to the Code. Every true friend of the Academy is earnestly requested to attend its meetings in order to resist the introduction of discussions and controversies in relation to ethics, by simply maintaining, in their integrity, the time-honored constitution and by-laws of this institution, to which it owes its origin and prosperity. Abram DuBois, Austin Flint, Austin Flint, Jr., J. W. S. Gouley, John H. Hinton, Samuel T. Hubbard, Wm. T. Lusk, Samuel S. Purple, T. Gaillard Thomas, *Council.*

DIABETES AND THE BROMIDE OF POTASSIUM.—French therapeutists are still debating the question of the value of bromide of potassium in diabetes. According to a recent communication to the Academie de Médecine, bromide of potassium forms a good adjuvant in certain cases, but as it has a very depressive effect on the system it should only be used concurrently with other remedies which would raise the tone of the constitution. M. Bouchardat agreed with this view. He believed that the salt in question was useful in certain cases, but should be used with prudence. He thought that preference should be given to *régime* and gymnastic exercises. M. Lanier said that in the cases of children and the aged bromide of potassium should not be used. M. Hardy could not adopt the views of his colleague; he obtained very good results from the bromide in diabetes. He gave it in the dose of a drachm daily, and instead of the strength of the patient diminishing under its influence, it increased. The opinion of your correspondent, who has had the opportunity of using it in this malady, is that it certainly is of great use, as it effectually calms the great agitation of the patient, especially at night, when the great thirst prevents sleep.

TYPHOID FEVER AND ETHER.—A French physician has published five cases of typhoid fever treated by subcutaneous injections of ether, which he considers as the best mode of administering stimulants in the adynamic forms of the disease. Two injections, of twenty drops each time, were made daily, and under its influence the patient was aroused and delirium ceased. In pneumonia, these injections are of the greatest utility, as they are in every malady assuming a typhoid form.

A THERAPEUTIC SUMMARY.—The following notes by Dr. Ad. Vomácka, of Leitmeritz, give, in a very condensed form, some of the suggestions and additions which have been made of late to therapeutical literature:

Typhoid fever.—Tinct. iodin., 0.5; glycerin., acid. carbolic., āā gtt. 5; tinct. ratanh., 10.0. Give 5 to 10 drops every one or two hours, in tea or coffee.

Alcoholism.—At the beginning give hypodermic injections of sulphate of strychnine, 0.005 per dose. Internally give several times daily 4.0 to 8.0 of tincturæ strychni. As a prophylactic put a small amount of strychnine in the whiskey.

Anorexia.—Give pepsin, with potassium phosphate.

Asthma.—Potassium iodid., 20.0; vini, 180.0; syr. aurant., 20.0. Sig.—one-half teaspoonful three times a day. After some days increase to one teaspoonful; continue for two or three weeks, then gradually decrease.

Ascarides in children.—Sem. cucurbitæ decoct., 30.0; aquæ aur. fl., 3.0; mel. dp., 30.0. Give twice in the morning, then a dose, 15.0, of castor-oil.

Condyloma of the penis.—Wash with salt water, then powder with calomel; corrosive sublimate forms in small amounts, causing the condyloma to decrease.

Diabetes mellitus.—Solution of bromide of arsenic is to be given in doses of one drop in a glassful of water. This dose is gradually increased to three drops three times a day, always in the same amount of water. The urine is to be constantly examined. When the amount of sugar is decreased, as usually happens in about fourteen days, then decrease the arsenic to one-drop dose again. This can be kept up for years. Extreme attention need not be paid to the diet, but ordinary care as regards acids, starchy and sweet food should be taken. The greatest enemy of the diabetic is bad air, the air of chambers. Fresh air is most essential.

Chronic diarrhœa.—Zinci oxid., 3.5; sodæ bicarb., 0.5. Divide in four powders, and give one every three hours.

Diphtheria.—Potassium iodid., potassium chlorat., āā 4.0; aquæ, 100.0. Give one teaspoonful every half hour to children under five years of age, two teaspoonfuls to children under ten years of age.

Dysentery.—Decoct. quiniæ, 200.0; potass. chlorat., 4.0. Use in twenty-four hours.

Epilepsy.—Sodii bromid., ammon. bromid., āā 10.0; aquæ, 300.0. Give four to eight tablespoonfuls per dose in infusion of valerian. As supplementary give extract belladonnæ, zinci oxid., āā 1.0. Div. in pil. No. 40. Give about four pills daily. Keep the bowels open.

Gonorrhœa.—Injections of chloral hydrat., 3 to 250 of water, twice daily. Internally, potassium chlorate, 3.0 per dose.

Whooping-cough.—Olei terebinth., 10.0; syr. althææ, 80.0. One teaspoonful every three hours. Children between one and a half and four years of age may be given five to eight drops of tincture of eucalyptus in sugar-water, every three hours, or tinct. eucalyptus, 3.0; glycerin, syr. simpl., āā 15.0; aquæ, 100.0. One teaspoon-

ful every three hours. Cure may be expected in three or four weeks.

Phthisis.—Give twice daily, by an inhalation apparatus, twenty drops of a mixture equal parts creasote and chloroform dropped upon a sponge. Internally iron (?), quinine, hypophosphites, and cod-liver oil.

Insomnia.—Cannabinum tannicum.

Syphilis.—As a substitute for mercury: 0.3 bichromate of potassium in 600 parts of carbonic acid water.

Chronic rheumatism.—Pulv. capsici annui, 8.0; adipis, 30.0. Rub upon the affected part for ten minutes with the gloved hand.

Warts.—Burning with sodium æthyl. Hemorrhoids, bleeding, iodoform suppositories, 1 to 20. Fifteen suppositories ought to be sufficient.

Vomiting of pregnancy.—I. Potas. bicarb., 5.0; potass. bromid., 20.0; aquæ, 60.0.—II. Acid. citric., 4.0; syrup., 4.0; aquæ, 120.0.—A teaspoonful of I., and a tablespoonful of II. mixed, and drink effervescing every half hour.

Remarkable Fecundity.—Dr. F. P. Atkinson writes to the *British Medical Journal* as follows: "I have just come across a somewhat remarkable, well-authenticated instance of fecundity. The lady, who was of good position, married at sixteen years of age and died at sixty-four. She had thirty-nine children (all by the same husband, whom she survived) thirty-two daughters and seven sons, and they were all single births except two, which were twins. An interesting point is that all the children lived to attain their majority."

Fumigant Mixture against Mosquitoes.—Munch, in *L'Union Médicale*, vouches for the efficacy of the following:

℞. Pulv. potas. nitrat.....	30	grammes.
Acid. carbolic.....	20	"
Pulv. insecticide (Persian).	125	"
Pulv. carbon. lig.....	250	"
Gum tragacanth	q. s.	

French Hospitals.—A recent inquiry made by the Bureau of Public Assistance shows that there are at the present time in France 1,563 hospitals and asylums of all kinds, giving a proportion of one establishment for every 24,000 inhabitants. The officials and *personnel* of all these amount to 28,676 persons, viz., 2,787 physicians and surgeons, 3,050 dressers and hospital attendants, 11,286 on the religious staff, and 11,553 servants. The number of beds in the 1,563 establishments is 164,955, of which 71,192 are at the service of the sick, 54,245 for incurables and infirm patients, 16,050 for children, while 23,459 are reserved for those engaged on the nursing staff. With regard to ordinary cases, the number of patients admitted amounts to about 360,000 every year, with an average of 40,000 for special treatment. In general the proportion of admissions into the hospitals are 90 to every 10,000 inhabitants.

Hospital Accommodation on the Continent.—An article in the *Journal de Statistique Suisse* gives the following figures respecting the number of beds in proportion to the inhabitants in some of the countries of Europe, from which it appears that Switzerland is the best furnished with accommodation in this respect. The statistics are as follows:

Country.	Population.	Number of beds.	Number of inhabitants per bed.
Switzerland	2,846,102	17,757	160
Wurtemburg	1,881,505	8,814	213
France	37,672,048	140,000	269
Hesse	884,218	1,975	448
Austria.....	21,747,069	38,251	569

Lunatic asylums or hospitals for the insane are not comprised in these figures. Switzerland contains fourteen of these establishments, which between 1877 and 1881 received 7,700 patients, of whom 4,044 were men and 3,656 were women, an average of about 1,540 new patients per year. Of this number the mental condition of 21.31 per cent. of the men and 2.81 of the women could be directly traced to the abuse of alcohol.

A Rare Form of Imperfotate Anus.—Dr. Hattie A. Galentin, of Cleveland, O., communicates the following: "In The Medical Record of July 28, 1883, is epitomized a case of imperforate anus very similar to one which occurred in my own practice a few months since. When first brought to my office on March 28, 1883, the child, a female, was five months old, large, and apparently healthy. The mother stated that its bowels had not moved for nearly two weeks. I prescribed hydrargyrum cum creta, to be followed by a large dose of castor-oil. Two days later, no evacuation having occurred, a soapsuds injection was ordered. The mother declaring it impossible to pass the smallest nozzle of a Davidson's syringe, I examined, and found the perineum a perfectly plain surface, the point where the anus should be marked only by the usual pigmentation. Halfway between this point and the posterior commissure, in the median line, was a fistulous opening one-eighth inch in diameter. The mother said the child's bowels had always been regular till two weeks before. I introduced a small French soft catheter and injected through it sufficient water to liquefy a large quantity of fecal matter, which was discharged through the fistula, to the evident relief of the child, who had been making vigorous, though unsuccessful efforts to empty the bowel. Four days later I operated, having in the meantime used several injections through the catheter, and thus emptied the bowel of a large accumulation. The fistula was an inch in length and nearly straight. A probe, bent at a right angle, when passed through it, presented at the point where the anus should have been, and could be distinctly felt through the thick skin closing the bowel. I cut down upon the probe point, passed a director through the fistula and out of the opening just made, and cut through the tissues as in an ordinary case of complete fistula, completely dividing the sphincter. The bleeding, which was profuse, was controlled by ferri persulph., the bowel washed out with carbolized water, and two laminaria tents left in the wound. Six hours later, the laminaria tents refusing to stay in place, tupelo tents were substituted and gave perfect satisfaction. After two days dilatation the wound was permitted to heal. The operation was followed by no fever, no inflammation, no disturbance of any kind, and *no incontinence.* The fistula healed nicely, the artificial anus proved ample, and no trouble has since been experienced. The remarkable point in this case is that until the child was four and one-half months old, the malformation gave rise to no inconvenience; indeed, it was not known to exist, the parents regarding the mouth of the fistula as a very small anus 'in the wrong place.' And that so small a fistula should have proved adequate for so long a time is truly surprising. Only when the child began to take solid food did symptoms appear. The fistula must have been completely formed during fœtal life, as meconium was passed soon after birth."

New Uses for the Thermometer.—Dr. J. T. Welch, of Keyport, N. J., writes: "Being called to prescribe for a patient living in the hills above Keyport, who had long been afflicted with epilepsy, and whose mind was now somewhat impaired, I noticed a remarkable pallor of countenance and that the surface of the body was very cold to the touch, so produced a clinical thermometer to ascertain the temperature. The young man evidently looked upon it as a part of the treatment, and further impressed by the admiring awe of his relatives, closed his lips upon it with as pious a care as though it had been Tyndall's prayer-gauge, and speedily seemed oblivious of all earthly things. So rapt was he that when I went to withdraw the thermometer he gave a

start like one rudely assailed. 'How did it affect you?' queried I. 'Very well indeed,' he replied; 'I think it has made me feel much better.' And then, raising his hand with an air of benediction, he added, 'It had such a quieting influence.' An hour afterward I visited a young domestic in another family, who was convalescing from a mild attack of typhoid fever, where the temperature had ranged from 100° to 102° for several days. While here I related the above incident to her employers, who laughed heartily, but the girl, with a look of scornful superiority, cried out, 'Pooh! he mustn't ever have seen one before! why, I have had two at a time in my mouth, and thought nothing of it.' 'Why was that?' asked I. 'When I was on Randall's Island.' 'Yes, but why? what were two used for?' 'Because—because,' blurted she in confusion, 'my fever was so high they couldn't tell it all on one!'"

THE DISEASE OF THE MONEY COUNTERS.—A Washington correspondent visiting the Treasury Department, noticed that many of the women employed in counting bank-notes looked ill and had sores upon their hands or heads. The superintendent gave the following account of the trouble: "Very few," he said, "who spend any considerable time in counting money escape the sores. They generally appear first on their hands, but frequently they break out on the head, and sometimes the eyes are affected. We can do nothing to prevent this. All of the ladies take the greatest care of themselves in their work, but sooner or later they are afflicted with sores. The direct cause of the sores is the arsenic employed in the manufacture of the money. If the skin is the least abraded, and the arsenic gets under the flesh, a sore will appear the next morning. The habit that every one has of putting the hand to the head and face is the way the arsenic-poisoning is carried to those portions of the body. See here," said Mr. Rodgers, stopping by the side of a young lady, and picking up a glass vessel containing a sponge, "this sponge is wet, and is used to moisten the fingers while counting the money. You see how black it is. That's arsenic. Every morning a new piece of sponge is placed on the desk of each employe, but before the day is over it is as black as this. I have known half a dozen cases where ladies have been compelled to resign their positions. There are three ladies who were here six years before they were afflicted with sores. About three months ago they were so visited by them that they had to quit work. They have been away ever since, and the physician's certificate in each case says that their blood is poisoned with arsenic."

"FOR THE ARREST OF NASAL HEMORRHAGE," writes Dr. Lewis, in the *Polyclinic*, "I know of no device so good as one that may be readily extemporized with a strong piece of cord and some small pieces of sponge. The cord is tied securely to a piece of sponge, cut rounded, and just large enough to be forced backward through the nostril. Then a number of similar pieces of sponge, with a hole through the centre of each, are threaded successively on the cord. The sponge on the end of the cord is then pushed, with a probe or dressing forceps, through the nostril, quite back to the faucial orifice; and the rest of the threaded pieces of sponge are slid back, one at a time, until the nares is tightly filled. When the patient becomes secure against a repetition of hemorrhage the plugging is readily removed, one piece of sponge being withdrawn at a time. with the dressing forceps. The posterior nares may also be easily plugged by introducing either a slender gum bougie or a piece of thick catgut string, with a cord attached, through the nares, catching one end of it in the fauces with forceps, and drawing it forward through the mouth. To the cord which follows a piece of sponge or pledget of lint is tied, to be drawn up into the posterior nares. A method of making unirritating and painless pressure within the nares, in cases of obstinate epistaxis, is by a piece of the intestine of a chicken or other small animal, about twelve inches long, partially filled with either air or water. One end of the intestine is, while empty and collapsed, pushed backward through the nares; when thus lodged the air or water in the other end is forced, by compression with the hand from the pendulous portion, into the part lodged in the nares. Strong, equable compression can thus be made, rendering hemorrhage impossible."

MARRIAGE AND MORTALITY.—Dr. William Pratt writes concerning this subject: "Take the male sex, and it is seen that from twenty-five to thirty years of age, 1,000 married men furnish 6 deaths; 1,000 bachelors furnish 10 deaths; 1,000 widowers furnish 22 deaths. The figures, however, become very unfavorable if the marriage be contracted before twenty. Out of 8,000 young men married before twenty, their mortality has been found to be, before marriage, only 7 per 1,000; after marriage, 50 per 1,000. With respect to the female sex we find a similar advantage of marriage over celibacy, but on the same condition. If young girls be turned into wives before twenty a like mortality befalls them which befalls the other sex. Everywhere young married people from eighteen to twenty years of age die as fast as old people from sixty to seventy years of age. The common sense and common law of Western Europe have with perfect justice marked twenty-one as the age of maturity. After that epoch, however, marriage should be contracted as soon as practicable. It is the healthiest and the happiest life; the best for the individual and for the community."

MULTIPLE SARCOMATA.—Our Cincinnati correspondent writes: "In the City Hospital, under the care of Dr. Rathaker, is a case remarkable for the number of sarcomatous tumors or nodules present. Five hundred and sixty-eight nodules have been counted that project above the surrounding surface. The nodules vary in size from a pea to a walnut. The patient is a white man, native of this city, fifty years of age. He is not emaciated, and has no great amount of pain. Some of the tumors are somewhat painful when handled. Some of them are pigmented, but the great majority are uncolored, a very few are ulcerated. The man also has a large sarcocele. The patient last winter had a nævus (at least that was the diagnosis then) removed from his back, since which time these nodules have made their appearance. The patient has no general pigmentation of surface. Dr. Rathaker intends to publish a full report of the case." Another remarkable case was reported last year by Dr. Wm. H. Talls, of this city. It was a case of general melanosis, originating from, or preceded by a melanotic sarcoma. The patient before his death became very dark, or black, not only the skin, but the brain, internal organs, etc., being deeply pigmented.

DR. GEO. HAMILTON TO DR. CARROLL.—Dr. Geo. Hamilton, of Philadelphia, Pa., writes: "I was not a little surprised and mortified on reading in your last issue the note of Dr. Alfred L. Carroll, objecting to the manner in which I had replied to his critique upon my views in regard to the subject of sewer-gas, contaminated water, etc., in the production of typhoid fever and, incidentally, diphtheria and scarlet fever, as expressed in a lecture before the College of Physicians of this city. On referring at once to the paragraph to which Dr. Carroll has called my attention, I was mortified to find that his imputation was well founded. In the second column of his paper, in THE RECORD of June 9th, one-third from the top, occur these words: "Very few physicians in *this* country have cared to learn," whilst in my paper *the*, instead of this, appears, and thus changes the meaning of the sentence entirely. A too hasty habit in reading and writing can alone account for this error, and I regret that the absence of Dr. C. from the country did not admit of an earlier correction. It is possible that a few words, more or less, may have been used in a quotation, if so, they have escaped my observation."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 16 NEW YORK, OCTOBER 20, 1883 Whole No. 676

Original Articles.

FURTHER INVESTIGATIONS INTO THE NATURE OF EQUINE SCARLATINA,

AND THE USE OF EQUINE VIRUS AS A PROTECTIVE AGENT.

BY J. W. STICKLER, M.D.,
ORANGE, N. J.

SINCE May 1, 1883, I have inoculated with human scarlatinal virus two colts and one calf, with the following results: First colt, about one year old, in good condition; not having a discharge from either nostril; visible mucous membranes normal in appearance; rectal temperature before inoculation 101½° F.; after throwing the animal I injected into its right jugular vein about thirty drops of the fluid portion of some blood abstracted from a patient having scarlatina simplex. I also introduced under the skin of the thorax a blood-clot from the same patient, and caused the colt to swallow about two drachms of pharyngeal mucus. The temperature gradually rose till it reached 102½° F. (May 12th). Other than the elevation of temperature there was nothing abnormal noticeable; but during the night of May 12th the colt lacerated the skin, just inside the elbow, and at 11.30 A.M., May 13th, the temperature was 102¾° F.; May 14th, 8 A.M., temperature 103½° F. The temperature then began to fall and reached 101½° F., May 16th, 3 P.M. The inter-maxillary glands were somewhat enlarged and sensitive; the mucous membrane of nose and eyes injected, and from the nostrils there was a discharge of ropy mucus. Thinking that the inflammation resulting from the injury might possibly have masked some of the symptoms due to the action of the virus, I again injected (May 19th) into the jugular vein some pharyngeal mucus from two well-marked cases of scarlatina (both children). The only effect seemed to be an increased redness of the mucous membranes of the nose and mouth, *i.e.*, an intensifying of the redness which was developed after the first inoculation. There was a slight sore throat, which disappeared with the fading of the redness of the mucous membranes. The symptoms enumerated had almost entirely disappeared by May 24th. There was no subsequent œdema of the extremities or sheath, neither was there any desquamation of the cuticle or mucous membranes that I could discover. The rectal temperature of the calf before inoculation was 101½° F.; the condition of the animal was in every particular good. Human scarlatinal blood was injected into the general circulation, and under the skin of the abdomen. After a few hours had elapsed the skin at and near the point of inoculation became uniformly reddened and somewhat sensitive to pressure. There was no systemic disturbance, save a very slight elevation of temperature. The redness and sensitiveness of the skin increased till May 24th, when I discovered pus at about the centre of the area of redness. The temperature at that time was 102½° F. The mucous membranes were not affected; no enlargement of the lymphatics; recovery was complete by June 1st. Second colt, one year old. Her temperature for four successive days before inoculation was as follows: June 18th, 101¾° F.; June 19th, 101¾° F.; June 20th, 101¾° F.; June 21st, 101¾° F. The colt was perfectly well, so far as could be determined by a careful examination. June 28th, enveloped her head in a bag, containing a chemise worn by a scarlet-fever patient. This I allowed to remain adjusted about seventy-two hours; July 2d, injected into left jugular vein, and into vein of leg some human scarlatinal blood; July 9th, introduced under skin of abdomen some epidermal scales from a scarlet-fever patient. Within forty-eight hours after the first inoculation (July 2d) the temperature began to rise, the colt became less active, showing a disposition to keep quiet. On the sixth day she began to cough slightly at intervals, and although the appetite was good, there was difficulty in swallowing. The visible mucous membranes were quite red, and at certain points they had somewhat the appearance of the mucous membrane of the pharynx in man when affected by scarlet fever. The inter-maxillary glands were enlarged and sensitive, and when the throat was pressed upon, the colt evinced uneasiness. There was a discharge of tenacious mucus from the nostrils. An examination of the interior of the pharynx revealed an unusual redness.

During the time the throat was sore and the mucous membranes affected, the temperature ranged between 101¾° F. and 103° F. In this case there was a desquamation of the skin at a few points where I had not previously seen any eruption. There was no swelling of the extremities or any symptoms of renal complications. Dr. Fenner, a veterinary surgeon of long experience, saw the first colt when she presented the symptoms already given, and he pronounced it a case of scarlatina similar to mild cases he had seen in his own practice. Dr. Hawk also saw her at about the same time, but was less positive in relation to the significance of the symptoms. He stated that he had seen many cases of what he regarded as true equine scarlatina. Drs. Lyon and Corliss saw the second colt. Dr. Lyon said it was a case of equine scarlatina, the symptoms being due to the action of the human virus which had been introduced into the blood. He believes in the existence of the disease (scarlatina) in the horse, and gives me the following history of a case he treated not long since: He was called on Monday to see a gelding, eight years of age, having enlarged submaxillary glands, sore throat, and elevation of temperature. On Tuesday the hair and skin of face, neck, and shoulders were found to be elevated at intervals, forming papules which could be felt with the fingers. The soreness of the throat was more intense on Tuesday, and a bright scarlet eruption was seen upon the mucous membrane of the septum nasi. During Wednesday the rash disappeared and the soreness of the throat became less troublesome. There was a discharge of mucopurulent matter from the nose. The temperature ranged between 103° F. and 106° F., and the pulse between 60 and 70. After the eruption had entirely receded, the skin began to desquamate, and it was with difficulty that the groom could cleanse the animal so as to make him presentable. There was developed afterward dropsical swellings of the sheath and extremities. Dr. Corliss, who saw the last colt, was somewhat doubtful about the condition, thinking that it might not be a specific lesion: he had never in his own practice treated what he felt confident was equine scarlatina.

I have also inoculated several children during the last summer, all of whom had been, and were at the time of inoculation exposed to the influence of air contaminated by the breath and exhalations of a scarlatinal patient. In the following instance the child had been in constant

companionship with her sister, who had scarlet fever, for five days, sleeping with her at night. I inoculated the healthy child in the arm, and notwithstanding she was not isolated, but allowed to remain in the same room with her sick sister, she did not develop the disease. In the next four cases the source of contagion was a child aged about five years, who was allowed to remain in a room in which her three brothers and sister were continually playing. I inoculated the four children at the same time, after which they were allowed to remain exposed to the contagion. Within the first twenty-four hours the two oldest developed scarlet fever, and within the next twenty-four hours the remaining two contracted the disease. On April 18th I inoculated two brothers, aged respectively seven and three and one-half years; they had been exposed several days, but neither one contracted the disease.

In both these cases there was considerable inflammation about the point of puncture, and in one quite free suppuration supervened. The next four cases were inoculated after an exposure of two or three days. The youngest child, about ten days after vaccination, began to show signs of a general systemic disturbance, *i.e.*, vomiting, impaired appetite, restlessness, and slight fever. In a few hours an eruption, characteristic of scarlatina, developed, beginning at point of inoculation and spreading uniformly over the body and extremities. There was neither sore throat nor headache in this case, and no albuminuria afterward. The next two had an eruption upon the neck, trunk, and extremities, but no vomiting or sore throat, and but very slight rise of temperature. The skin in each case desquamated in small scales after the disappearance of the eruption. Not one of the cases was confined to bed from the time of inoculation till complete restoration to health. The fourth child escaped without any disturbance, except that due to the action of the virus (locally). The last two children I inoculated had been playing in the same room with a sister who had scarlatina anginosa. The duration of exposure had probably been about three days. Five hours after being vaccinated one of the girls developed scarlatina simplex, and at the expiration of about five days the second child contracted the disease. Both these cases were followed by albuminuria, although they made a good recovery. Having carefully considered these results I am inclined to form one of two opinions, namely, that the virus used did not have any protective power, or that in the unsuccessful cases the failures were due to a pre-existing state of impregnation of the system with the human scarlatinal poison. Some of the first cases I inoculated (already reported) have been exposed to scarlet fever through the influence of air more or less charged with the specific infecting principle, and yet they have escaped the disease. It is no doubt true that some persons have but a slight predisposition, and the absence of the disease in some of the instances might be explained on that basis. I have also learned that human scarlatinal blood, even when taken from a patient having quite a severe type of the disease, does not necessarily induce the disease, or cause death when injected under the skin of the rabbit or other lower animals, and I reason from this fact that the most satisfactory way to determine whether a person has been protected by inoculation against scarlet fever, is to expose the person to the influence of the poison as it operates through the media which are supposed generally to convey it from the affected to the healthy, *i.e.*, by means of the air, fine epidermal scales, etc. John C. Peters, M.D., has written a series of articles in the *Sanatarian*, concerning the literature of equine scarlatina, and a perusal of them will disclose the fact that the disease has been recognized and described by various veterinarians who are believed to be reliable in their statements.

George Armitage, D.V.S., describes two forms of the disease, scarlatina simplex and scarlatina anginosa. He states that the simple variety usually makes its appearance after an attack of influenza, "so called," has existed some days, or it may appear in an animal hitherto apparently free from the disease named. It consists of a number of blotches affecting the skin of the body, face, neck, and legs, which give rise to scarcely any swelling but cause the hair to stand erect and staring. Those parts covered with loose, thin skin, and having little hair, have rounded pimples which may be distinctly felt as well as seen. The legs swell and cause stiffness in some instances, but they are not always affected. The nasal membrane is also studded with scarlet spots having no uniformity in size, but which shortly give rise to a thin, serous discharge, subsequently changing to a yellowish or brownish color; occasionally these spots are confined to one nostril, and may constitute the whole of the outward signs, neither eruption nor swelling of the limbs being present. Soreness of the throat is evident, which sometimes creates inconvenience by causing the animal to leave off feeding. The scarlet spots gradually fade, and disappear after a few days, and the skin eruption also declines, the cuticle peeling off in large quantities, because of which the coat becomes very scurfy. The second form (scarlatina anginosa) appears as an aggravated condition of the simple form. In it the limbs swell rapidly and pit under pressure. Circumscribed tumefactions occur, which are hot and tender; these may unite, forming larger swellings; others decline; while still others remain distinct, and at a later period become moist on the surface by reason of the discharge of a thin, yellowish fluid. Small swellings or pimples occupy the rest of the surface of the skin, similar to those of simple scarlet fever. The spots on the mucous membrane of the nose enlarge, and frequently run together, forming larger blotches, or the Schneiderian membrane may have a deep scarlet hue, sometimes merging into purple. The throat is involved greatly, noisy cough, with abundant discharge of mucus having various shades of red and yellow. Respiration is interfered with, the inspiration partaking of a roaring kind of sound, with snuffling through the nostril. Swelling takes place beneath the jaws, sometimes also under the shoulder and in other places. Symptomatic fever usually runs high in proportion to the amount of eruption and soreness of throat. Pulse weak, small, and compressible (60 to 100) in intense cases. Respiration rapid. Bowels constipated, although diarrhœa is rapidly induced. Urine deficient, thick, and offensive. In the most favorable cases the throat affection disappears side by side with the eruption on or about the fifth day.

FUNCTIONAL DISEASES OF THE HEART.

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Part I.—Physiological.

Claude Bernard in some of his physiological works felicitously shows the fundamental similarity and unity of all living elements, whether pertaining to the highest or the lowest organisms. The primary conditions of living are the same in all: warmth, moisture, pabulum, oxygen. These must be supplied by their environment; aquatic animalcules obtain them in the liquid medium in which they live, and the essentially living elements of the higher animals dwell in and are constantly bathed by an "interior medium," the circulating blood, which is their real environment. The life of these anatomical units is in strict and absolute dependence on a constant renewal of this fluid, and the heart, of all the organs of the body, is the one whose function begins the earliest and lasts the longest. It begins its untiring work long before it is developed; its perseverance in toil is in the ratio of the importance of the mission which it fulfils; it is the *primum movens*, and the *ultimum moriens*.

"Whatever the complexities of the human organism," says Frederick Harrison, "there is throughout the whole the solidarity of a single unit."

The presence of a nervous system is no more an indispensable factor of this organic unity than is the presence of a circulatory system, and integrity of the central organ of circulation is necessary for the healthful performance of all function.

The demonstration of this proposition is the well-known effects of disease of this organ. Take as an example a well-marked case of aortic insufficiency (Corrigan's disease). Here, with every diastole of the heart, a portion of blood, thrown into the aorta during systole returns, and you have constantly the pulse of unfilled arteries; there is oligæmia in the capillary system. As a consequence the vital elements are everywhere ill nourished. The brain is anæmic and irritable, thought is sluggish, psychical action generally is perverted and deranged, innervation languishes. The powers of the digestive system are impaired; the alimentary canal is the seat of venous stasis in which the other abdominal viscera participate; frequent attacks of dyspnœa (dyspnœa which becomes more and more permanent) testify to the profound disturbance of the pulmonary function.

The reciprocal influence of the organic processes on the heart has been for ages a matter of observation, though it is only of late years that its mechanism has been known; if integrity of the heart be essential to the healthful performance of the systemic functions generally, integrity of the latter is equally essential to the normal working of the heart.

The slightest emotion causes some brief disturbance of that organ; a powerful emotion may temporarily or permanently suspend its action; the stimulus of volition may goad on the heart to efforts which end in exhaustion or in disease. Peripheral irritations—manifested to consciousness as pain—may raise the blood-pressure in the viscera, and visceral irritations may augment the heart's action, or inhibit it altogether.

Nothing can, in fact, be more interesting than this whole study of the reciprocal action of the organism on the heart. Hard thinking calls, as it were, more blood to the brain, and the heart does not fail to respond to the demand; severe muscular exertion drafts more blood to the muscles; the process of digestion requires more blood than is required during a quiescent state of the stomach; during gestation the heart of the pregnant woman is taxed to an extraordinary degree, etc.

If every powerful sensation may, as stated above, exalt or depress the heart's action, and if obscure visceral sensations may have the same effect, then it is obvious that the heart may be deranged, temporarily or permanently, by its environment, if the disturbing causes be too violent or too persistent. That the heart is something besides a mere force-pump or hydraulic machine; that it has a wonderful power of adapting itself to changes in its internal and external circumstances; that it is in the closest relations with the tissues which it nourishes—sharing in their well-being, suffering with their derangements—is explicable, as a physiological fact, by a consideration of the nervous mechanism of the circulatory organs.

The cardiac innervation comprehends certain intra-cardiac ganglia, extra cardiac ganglia, and nerves, derived from the sympathetic and cerebro-spinal system.

I. *Intra-cardiac ganglia.*—There are in the walls of the heart certain ganglia whose office is to promote and regulate the rhythmical working of the cardiac muscle. Not that the ability rhythmically to contract is not an inherent property of the myocardium to a certain extent, independent of the nervous system. It is nevertheless true, that in the performance of its ordinary function the heart is governed by nervous influence. Certain of these ganglia (ganglia of Remak) are placed at the point of entry of the nerves of the heart, the cardiac branches of the sympathetic and pneumogastric, whose terminal filaments are lost in these ganglia; they occupy the sinus of the vena cava. Other ganglia, those of Bidder and Ludwig, are situated in the auriculo-ventricular furrow. In these ganglia originate fibres, some of which, centrifugal, are distributed to the muscular fasciculi; others, centripetal, terminate in the endocardium. These ganglia, with their centripetal and centrifugal nerves, constitute an excito-motor arc, and are to a certain extent independent nerve-centres.

II. *Extra-cardiac ganglia.*—If we are to understand by this term every nerve-centre which influences the heart, we should have to include the entire cerebro-spinal and sympathetic system; the cardiac centre, *par excellence*, however, is the medulla oblongata. When by means of powerful electric currents you excite the rachidian bulb between the tubercula quadrigemina and the calamus, you obtain an arrest of the heart, or a simple slowing of the movements of this organ, according to the intensity of the current employed.[1] If previously you cut the pneumogastric nerves, the excitation of the bulb at the point indicated produces an acceleration of the movements of the heart. It would seem, then, that the medulla oblongata may, according to circumstances, cause retardation or acceleration of the cardiac contractions; it is especially the centre of impressions, which reflexly affect the frequency and rhythm of the cardiac movements.[2]

It is inferred that the effect of increased blood-pressure in slowing the pulse when the vagi are intact is brought about through this augmented pressure stimulating the cardio-inhibitory centre in the medulla, and thus partially inhibiting the heart (M. Foster, "Physiology," p. 151). The inhibitory action of the pneumogastric on the intra-cardiac ganglia is not well understood. That this inhibition coexists with augmented innervation and augmented energy is indisputable. Through the influence of the pneumogastric a more complete and extensive *libero-motor* action is obtained in the intra-cardiac ganglia, which, thus energized, slowly but thoroughly evoke the consentaneous activity of all the constituent fasciculi of the myocardium. It is "a long pull, a strong pull, and a pull altogether."

Other extra-cardiac ganglia exist in the cervical portion of the spinal cord. These ganglia may be regarded as the centres of the accelerator nerves—the thoracico-spinal filaments, as well as those which emanate from the great sympathetic (the latter having its origin in the spinal cord). Von Bezold has proved that excitation of the spinal cord, especially in its upper portion, augments the energy of the heart and the arterial pressure. It is worthy of note that these centres (auxiliary cardiac ganglia) are in the closest relation with the vaso-motor centre, and that any excitation which raises arterial tension may be attended with accelerated cardiac action. Ludwig and Thiry have clearly proved this intimate relation.

III. *Accelerator and moderator nerves of the heart.*—There are certain nerves whose office is to quicken, others whose office is to moderate the action of the heart.

1. *The accelerator nerves* are intimately blended with the sympathetic system passing through and being associated with the lower cervical and the upper thoracic ganglia, but they are ultimately derivable from the cervical spinal cord. Irritation of the sympathetic or cervical spinal cord produces acceleration of the heart's pulsations through these nerves.[3] Very strong faradic currents are needed for effecting this result; these nerves seem to be unaffected by the various poisons which act upon the vagus and other parts of the nervous system; they are effective in the midst of profound asphyxia.[4] They are not considered as antagonistic to the pneumogastric, for if during maximum stimulation of the accelerator nerves the vagus be stimulated, even with minimum currents, inhibition is produced with the same readiness as if these were not acting. But little is known of the actual share which these nerves take in the natural actions of the economy.[5]

[1] Germain Sée: Maladies du Cœur, p. 420. Paris, 1882.
[2] Germain Sée: Loc. cit., p. 421.
[3] Foster's Physiology, p. 148. Germain Sée: Maladies du Cœur, p. 417.
[4] M. Foster: Loc. cit.
[5] Baxter: cited by Foster.

Indirectly, by reflex action, acceleration of the heart's movements is produced by excitation of the great splanchnic nerves, which causes contraction of the intra-abdominal vessels, increase of blood-pressure, and acceleration with augmentation of energy of the heart's action.

2. *The moderator nerves.*—It was a surprise to the world when Weber announced, forty years ago, the discovery that galvanization of the pneumogastric would arrest the heart's action. It was a greater surprise when the experiments of Weber, repeated by Budge, Waller, Brown-Séquard, and others, demonstrated that the heart, instead of being arrested in a state of spasm or contraction, was in a state of complete relaxation under the inhibition of a stimulus conveyed along the par vagum. A moderate excitation of the pneumogastric slows the heart's action, a violent excitation arrests it in diastole; but this excitation, if continued, is followed by acceleration of the cardiac movements from exhaustion of the pneumogastric. According to the experiments of Waller, the direct inhibitory fibres of the pneumogastric are derived from the spinal accessory.

If the pneumogastric is, *par excellence*, the moderator nerve of the heart, among its filaments is a sensory nerve, which is distributed to the heart, and which when irritated produces by reflex action dilatation of the splanchnic intra-abdominal vessels and lowering of the arterial pressure with slowing of the heart. This nerve is an inhibitory nerve, acting indirectly; it has a common origin with the pneumogastric in the medulla oblongata. Discovered by Ludwig and Cyon, it is called the depressor nerve of Cyon. Any excitation of the terminal endocardial filaments of this nerve is reflected from the medulla oblongata on the splanchnic nerves through the intermediation of the spinal cord, extreme dilatation of the abdominal vessels takes place under the influence of this excitation, and a large sluice-way is opened for a great mass of blood; there is thus a considerable depletion of the blood-vessels of other portions of the body, the peripheral resistance is reduced to a minimum, the heart's work is lessened, and the blood-pressure is lowered.[1]

As auxiliary to the cardiac nervous mechanism above mentioned, we have the vaso-motor nerves of the entire economy. Acceleration or retardation of the movements of the heart may be obtained by influences affecting the vaso-motor nerves. If we may consider these nerves as consisting of vaso-constrictors and vaso-dilators, any irritation of a sensory nerve will cause vaso-constriction of a part, and this augments peripheral resistance, and the work of the heart, whose pulsations are characterized by greater frequency and energy. The influence of an impression on the vaso-motors sufficient to markedly raise the blood-pressure and quicken the heart is seen when the great splanchnic nerve is moderately excited by electricity, as this nerve contains the vaso-constrictors of the intra-abdominal vessels—an experiment which has been described by Vulpian, Foster, and all recent physiologists. On the contrary, section of the great splanchnic is attended with abdominal vaso-dilatation and a marked fall in general blood-pressure, with lessening in the force and frequency of the pulse.

Influence of the blood-vessels on the heart.—Any considerable modification in the peripheral circulation, due to vaso-constrictive action, is attended with acceleration and augmentation of the heart's action. Claude Bernard attempts an explanation of this fact in a remarkable lecture on the physiology of the heart and its relations with the brain, delivered in 1865, but, singularly, invokes only the well-known influence of the pneumogastric. Vulpian has studied the subject more profoundly.[2] "Suppose," he says, "that under the influence of severe pain, caused by a wound, or even by pinching the skin in some place, there is produced a contraction of the greater part of the arterioles of the body, there will be augmentation of arterial tension, and the heart will have to struggle against this excess of tension. This organ will then be forced to put forth more energy to propel each ventricular wave into the aorta and arterial system. Not only will the cardiac contractions be more vigorous, they will become more rapid. Now it is clear that this reaction of the heart is not purely a mechanical effect. The modifications which characterize its movements are due to the putting in play of the apparatus of innervation of the heart. Under the influence of augmentation of the intra-arterial pressure, the blood contained in the ventricle undergoes, at the moment of systole and the opening of the sigmoid valves, an excess of tension. Hence results, without any doubt, a particular impression in the endocardial extremities of the centripetal nerves of the heart. This impression is carried to the rachidian bulb by the pneumogastric. There a phenomenon of central innervation takes place, as a result of which a centrifugal excitation, emanating from the medulla oblongata and the cervical region of the spinal cord, is conducted to the intra-cardiac ganglia by the cervical sympathetic cord and its ganglia. The fibres emanating from the cervical sympathetic cord and the superior cervical ganglia are probably those whose operation provokes a redoubling of energy of the movements of the heart. As for the acceleration of movements, this depends on excitation of the accelerator nerves which spring on each side from the third branch of the inferior cervical ganglia.

We see from this that the simple fact of contraction of the vessels has for necessary consequence, when the heart and its nervous apparatus are in the normal state, a very remarkable reflex modification of its movements.

If the peripheral vessels, arterioles and veinules dilate instead of contracting, phenomena just the reverse take place, the heart will contract more feebly and more slowly. The impression produced on the endocardium by the diminution of intra-arterial tension, will be necessarily very different from that which took place under the conditions which we have just examined.

Different phenomena of central innervation also are awakened in the rachidian bulb. This time the centrifugal excitation will put in activity the cardiac fibres of the pneumogastric. Under the influence of excitation of these fibres the movements of the heart will become weaker and slower.

The important point now to be noted is this: If the heart may be modified in its action by the condition of the arterioles and capillaries of a more or less circumscribed portion of the body, it may be deranged thereby temporarily, and even permanently. Functional derangements coexist with integrity of the heart-substance and the valves; but a persistence or intensification of the causes which give rise to functional troubles may produce organic disease. There is a morbid condition of the arterioles and capillaries known as arterio-capillary fibrosis, described by Gull and Sutton, Broadbent, Burdon-Sanderson, Mahomed, Lecorchi, and others. According to Gull and Sutton's hypothesis, this pathological condition, when it affects the renal circulation, is the chief secondary etiological factor of chronic Bright's disease—the morbid alteration of the blood—which causes these vascular degenerative changes, being primary. The high arterial pressure which results from this sclerosed condition of the arteries eventually entails on the heart dilatation and hypertrophy; but long before this structural modification takes place, the heart, laboring to surmount the peripheral resistance, manifests by exaggerated action its increased burden. The irritation of the centripetal nerves of the endocardium by morbid blood is undoubtedly, in these cases of chronic interstitial nephritis an important factor in the production of the ensuing cardiac changes. It is none the less true, however, that the mechanical obstructions are enough of themselves seriously to tax and embarrass the heart, which if it fail

[1] Vulpian: Appareil Vaso-Moteur, t. i., p. 354.
[2] Ibid., t. i., p. 366.

to meet the extra demands made upon it, will make known its incompetence by derangements of rhythm, passive dilatation, and asystolism.

Relation of work to the heart's action.—Severe exercise—physical and mental—increases the frequency and energy of the heart's pulsations. Augmentation of function necessitates a more abundant sanguineous irrigation. The working muscles or working brain demand more blood, and the heart is stimulated to increased activity. The mechanism is not easy of explanation. There are probably simultaneously going on vascular contraction and vascular dilatation, augmentation and diminution of pressure. Vaso-dilator action undoubtedly predominates in the parts under exercise, and though peripheral resistance is lowered, vascular tension is raised. This is practically the case, although theoretically it would seem as though it must be otherwise.[1] The pulse beats rapidly and with energy. A relatively quick pulse is quite compatible with a hard, strong pulse, and in experiments on animals it is generally noted that the movements of the heart are accelerated with augmentation of the intra-arterial pressure. It is also true that in the human subject a slow pulse and a strong, high-pressure pulse very often go together. The heart may meet its increased tasks by slow powerful beats, or by greater celerity of action, putting forth as much force in the one case as in the other.

The practical point to be now presented is this: If exercise compels the heart to do more work, severe exercise may enfeeble, and even exhaust the heart. This is the important physiological lesson for us now. There is no hard and fast line between that exaggerated action which accompanies overwork, and that exaggerated action known as palpitations.

The heart undoubtedly possesses extraordinary endurance and is popularly said never to rest. It may, however, be overtaxed and enfeebled, like any other muscle. This enfeeblement may manifest itself as want of muscular tone, which may result in dilatation, or in hyper-irritability of the intrinsic nervous ganglia of the heart, or its sensory nerves; the latter pathological condition finds expression in ataxia, arythmia, or intermittence, all resulting from exhausted cardiac innervation.

Modification of the heart's action by toxic agents.—We can experimentally produce accelerated action of the heart in animals by injecting certain poisons, as nicotine. After a moderate subcutaneous injection of nicotine there results a considerable acceleration of the pulse from paralysis of the inhibitory system.[2] We have actually produced palpitations, such as we see so often in smokers, from the depressing effect on the functions of the par vagum of tobacco. The toxic effect of nicotine is exerted on the bulb, whose reflex excitability it lessens and abolishes.

Similar effects on the heart and pulse may be produced by belladonna, or its alkaloid atropia, which is a veritable paralyzer of the pneumogastric.

Influence of emotion on the heart.—Enfeeblement and even paralysis of the inhibitory cardiac centres is witnessed under the influence of strong emotions. Everybody is familiar with the effect of fear in accelerating the heart's action. Intense sorrow or disappointment suspends the functional activity of the higher nerve-centres, and the heart in consequence lacks certain important stimuli to action. This organ, then, is hindered and inhibited in its action by the painful emotions; while the cheerful emotions raise the blood-pressure and energize the heart and circulation. These are facts of common experience.

It is scarcely possible at the present day to give a satisfactory explanation of the effects of the emotions on the heart and circulation. Fear and rage, for instance, cause powerful perturbation of the vaso-motor system, and make the heart beat quickly, wildly, and violently; and yet, as Darwin says,[3] it does not pump the blood more efficiently over the body, for the surface seems bloodless, and the muscular strength soon fails. At other times, the first depression is followed by vigorous reaction, in which the heart rebounds, as it were, like the horse which has felt the spur. The heart is, as Claude Bernard says, the most sensitive of the organs of the vegetative life, and undergoes some modification in response to every emotion.

The lesson which I wish now to convey is this: If the heart may be modified in its operations by strong emotion, it may be deranged thereby. Persistence of the cause will produce persistence of the effect, and functional perturbations engendered by grief, suspense, disappointment, etc., may, if the depressing emotion be long continued, become chronic. Here we have a possible explanation of many of those cases of chronic, so-called "essential" palpitations, when, for a series of years, there is inordinate frequency of the heart's pulsations without organic disease. Every disturbance of rhythm necessitates a new adjustment in correspondence with changed conditions, and equilibrium of any kind once established, tends toward permanence. The persistence of organic habits is, as Mr. Herbert Spencer would say, a corollary from the persistence of force.

Physiology thus furnishes important hints as to the possibility, the causes, and the modes of functional heart-troubles. The next paper will be occupied with Pathology.

[1] See Vulpian's Explanation, loc. cit., t. i., p. 476.
[2] Germain Sée: Op. cit., p. 232.
[3] Expression of the Emotions, etc., p. 76.

LICHEN RUBER OF HEBRA AND LICHEN PLANUS OF WILSON.

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In this paper I will describe the symptoms, anatomy, prognosis, and treatment of lichen ruber of Hebra, and of lichen planus of Wilson, with the object of comparing, in these several respects, the two forms of eruption described under these terms, and of estimating the tenableness of the grounds for regarding them as inflammatory or exudative affections, and but different forms of the same disease.

All writers except Auspitz consider the papules in both cases to be inflammatory in origin, and all except Neumann regard them as but constituting different forms of the same disease.

I will describe lichen ruber first and lichen planus afterward.

Lichen ruber of Hebra.—The symptoms here given are principally those described by the Vienna dermatologists, as their opportunities for studying the disease have been so much greater than those of physicians of other countries. In America I have had the opportunity of observing only one case, that of a man under the care of Dr. McMaster, of New York City. From this person I removed several papules, and the drawings Nos. 1 and 2 were made from sections of some of these papules.

Symptoms.—At the commencement of the disease the eruption consists of isolated, slightly scaly, millet-sized papules which appear in two forms; in the one form they are disseminated, of a bright or brown-red color, very dense in consistence, conical in shape, and the apex covered with a firmly adherent, dry, white, scaly mass which gives a rough feel to the touch. In the other form they are also disseminated and of similar size as those of the preceding form, but are pale-red in color, of a waxy shining appearance, the surface is smooth, rounded, and has a small central depression. This central depression corresponds to the orifice of a hair-follicle. The eruption may appear upon any part of the body, but generally commences on the thorax or abdomen and afterward extends to the extremities, genital regions, and other parts of the body. The papules preserve their original dimensions during their entire

existence, never increasing in size by growth at the periphery, the extension of the eruption always depending upon the formation of new papules of similar size and appearance to the already existing ones. These new papules which are being continuously formed arise either in an irregular manner upon the skin or in a row-like arrangement around or between existing papules. From this constant formation of new papules the skin over a greater or less area becomes more and more occupied by the eruption, until finally the whole area is covered by them, and consequently neighboring papules come in contact. When this last condition is present the eruption appears as a connected, red, infiltrated patch, covered with scales, and having a dry, rough, uneven surface. At the periphery of such an area or patch, characteristic individual papules are always to be observed.

Instead of this irregular and diffuse manner of formation of subsequent papules, they sometimes arise in the form of several circles of closely seated papules around an already existing papule. Afterward the more centrally seated papules sink in, become absorbed, and finally disappear, generally leaving the skin pigmented and atrophied in spots. In this manner variously sized patches arise, the central part of which is pigmented and contains atrophic depressions, while the periphery is formed of one or more rows of wax-like shining, umbilicated papules. I take it for granted that the umbilication of these papules as here met with depends upon the retrograde process taking place in them, and is not a primary condition. The papules never undergo any changes except resolution from cessation of the formative process, or atrophy from degeneration of the elements forming the papule.

The irregular and diffuse form of extension of the eruption is much more frequent than the aggregated and circular, and is generally the only form present, but the other may also occur exclusively, or, as occasionally happens, both forms are observed on the same person; in which case the former is met with principally on the trunk, and the latter on the extremities.

No matter in which form the eruption spreads, or whether it is accompanied by atrophy and pigmentation or not, it finally, as a rule, extends so as to occupy the whole cutaneous surface, when all signs of papule formation disappear, and the skin appears everywhere reddened, thickened, furrowed, and covered with numerous thin, whitish scales. The skin of the face becomes dry, cracked, and scaly, the lower lids ectropic, the upper lids droop. The thickness of the skin is especially to be observed on the palms of the hands and on the soles of the feet, where the eruption does not appear as papules, but as great thickening of the corneous layer. The fingers and toes in consequence of this thickening stand out apart from each other, half bent, and show, besides redness and infiltration, deep fissures and rhagades. Muscular movement is interfered with, especially at the joints so that the patient can only with difficulty keep the extremities fully extended or flexed, and consequently seeks a position between these two conditions.

When the eruption is general over the whole surface the nails always become affected; they are greatly thickened from a deposit of nail-substance from the bed of the nail, are of a yellowish-brown color, very brittle, and have an uneven surface. If the deposit takes place from the matrix alone, then the nail consists only of a short, thin, brittle plate, which projects from the flesh.

The nutrition of the hairs at the seat of the eruption is always interfered with, the hair becomes thinner, falls out, and is replaced by lanugo hairs. The hair of the head, axillæ, and pubis, situations where it grows stronger, and is most deeply seated in the skin, resists the process longer than that of the rest of the body.

The eruption appears without prodromal symptoms, and the papules, if situated on the covered parts of the body, may have developed without the knowledge of the individual affected. During the first stage, and also subsequently, there may be considerable itching present, but it bears no relation to the intensity of the eruption, and is much less than that accompanying many other skin affections. The general nutrition of the body is not interfered with until the eruption occupies a considerable area, when it suffers, and if the entire cutaneous surface is occupied by the disease the system becomes more and more affected, and after a few years the person passes into a marasmic condition from which he dies, unless he previously succumbs to complications depending upon this marasmic condition, as pneumonia, pleurisy, intestinal diseases, etc. This is the natural history of the disease, but under proper treatment the eruption may disappear without affecting the general constitution, or leaving traces of its previous existence upon the skin. When removed by treatment the disease is not liable to return. If it is not very extensive it may also disappear spontaneously.

Histology.—According to Hebra[1] no matter how red the skin appears before death it is found on post-mortem not to be thickened, but only pale, flabby, devoid of fat-tissue, and covered with a greater or less amount of scales. Under the microscope the hair-follicles are funnel-shaped with the apex of the funnel downward, and the papillæ and papillary vessels enlarged.

Neumann ("Lehrb. d. Hautkrankheiten," p. 308, Wien, 1880) found the corneous and rete layers increased in size, the interpapillary portions of the rete enlarged and showing growth downward into the corium. The papillæ were partly sunken aud atrophied, and partly, especially at the periphery of the papule, enlarged, and contained broad-meshed elastic fibres. The blood-vessels were enlarged, and cell-infiltration, especially around the vessels, was observed. The sweat-glands, ducts, and orifices were dilated by epidermic cells. The cells of the external root-sheath of the hair were increased, and formed conical projections into the surrounding tissue like in acinous glands. The root of the hair had a brush-like form. The muscles of the skin were hypertrophied.

Biesiadecki ("Untersuchungen aus dem Path. Anat. Institute in Krakan," Wien, 1872) does not consider that the changes described by Neumann, as occurring in the sheath of the hair-follicles, are characteristic of the disease or a necessary part of the process, as he found normal follicles within the area of the papules. He found the papillæ at the periphery of the papule swollen, the corium œdematous, the rete enlarged, and the central part of the papule corresponding to an area of about eight papillæ, sunken in and atrophied, thus producing the central depression or umbilicated appearance already described. He thought the atrophied centre corresponded to the place of insertion of a muscle-bundle, a view not compatible with the follicular origin of the papules. He also found colloid degeneration of the walls of the papillary blood-vessels.

Kaposi ("Path. u. Therapie der Hautkrankheiten," Wien, 1880, p. 403) agrees with the previous observers, but does not regard any of the changes described as characteristic or sufficient to explain the gravity of the affection.

From the foregoing we find that Neumann, Biesiadecki, and Kaposi do not agree as to the significance of the abnormal changes observed by them. All agree that the papillary blood-vessels are dilated and that there is an increase in the thickness of the corneous layer. That the hypertrophy of the external sheath of the hair-follicle is not characteristic as shown by its absence in some cases within the area of a papule. They attribute the umbilication of the papules to an atrophic process affecting the rete and papillæ of the central part of the papule, that is, the depression is a secondary condition depending upon retrograde changes occurring in an acuminated papule. The dilated papillary blood-vessels, the enlarged papillæ, the perivascular cell infiltration are probably

[1] Lehrb. der Hautkrankheiten, Erster Band, Zweite Lieferung, p. 391. 1874.

the grounds for each of them classifying the eruption as an inflammatory exudative affection.

Before entering into a discussion as to the inflammatory nature of the disease, or as to what processes or conditions should exist in order to justify us in classifying a cutaneous disease as inflammatory in nature, I will describe the changes observed in the skin in the papules removed from Dr. McMaster's patient. I will first describe the changes which occurred in a recent papule, and afterward in one of much longer duration.

Fig. 1 represents a section of a recent papule as seen with a low magnifying power.

The section includes normal skin at both ends and a transverse section of an entire papule. With a low magnifying power, as the section is here represented, the corneous layer is seen to be greatly increased in thickness in the situation corresponding to the seat of the papule, the thickness being greatest in the central portion and becoming gradually less as the periphery is approached. It is very undulating in appearance, the most depressed parts corresponding to the orifices of sweat-ducts or hair-follicles. The rete mucosum is slightly increased in thickness by growth upward toward the free surface, as shown by the uneven upper part of the papule portion, as compared with the normal rete at the ends. There is also a growth downward into the corium of the interpapillary parts of the rete. This growth in thickness of the rete mucosum is neither of marked extent nor general throughout the whole area of a papule, as in some places the rete is of normal thickness. The corium appears to be normal. The papillary blood-vessels are slightly dilated, and a few lymphoid corpuscles may be seen in their neighborhood. Some hair-follicles are hypertrophied and others normal, except at their orifice, which is wide and filled with corneous cells. The unstriped muscle-bundles are seen to be hypertrophied.

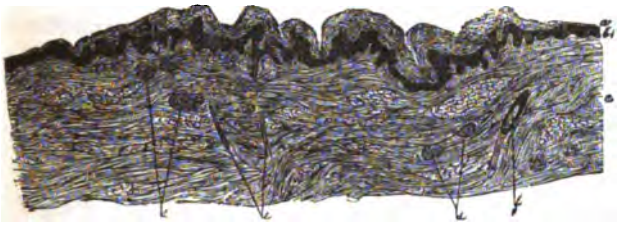

FIG. 1.—Vertical Section of a Recent Papule of Lichen Ruber. *a*, corneous layer; *b*, rete mucosum; *c*, corium; *d*, unstriped muscle-bundles cut transversely; *e*, sweat-ducts; *f*, hair-follicle. The section includes normal skin at the periphery.

Examined with a high power, the corneous layer is found to be greatly hypertrophied, from an increase in the number and size of the corneous elements. The individual elements also show an aberration from the normal process of corneous transformation, as many of the cells of the lower layers are incompletely transformed, as shown by the presence of nuclei, and their coloring with carmine. The nuclei present are either granular in appearance or like vesicles (aufgeblacht)—that is, large, round, transparent bodies. These incompletely changed cells are met with especially about the orifices of the sweat-ducts and hair-follicles. All the corneous cells are much larger than normal and more polygonal in shape, especially in the lower strata. The rete mucosum appears slightly hypertrophied throughout the greater part of its extent, but in some places is of normal thickness.

There is a slight growth downward of the interpapillary portion of the rete, and a more marked growth upward from the super-papillary part, giving to the upper part of this layer an uneven surface. The rete cells are of normal size and appearance, and seem to be merely increased in number. The granular and stratum lucidum layers are not as distinct as usual, but this may depend upon the locality from which the section was taken, as they were not prominent in the healthy tissue. The papillæ are increased in size from the growth of the rete downward; their blood-vessels are somewhat dilated, and a few emigrated corpuscles are present immediately outside the vessels. There is no appreciable œdema of the connective-tissue from inflammatory exudation. The corium is normal, except some of the blood-vessels are slightly dilated and a few emigrated corpuscles are present. The sweat-glands are normal, except the duct in the corneous layer, the walls of which are formed by large cells, some of which have vesicular nuclei. The hair-follicles are unaffected, except at the orifice, where there is a large collection of corneous cells. The muscle-bundles are hypertrophied to a marked extent.

Summing up the changes observed in the recent papule, we find the principal one to be in the corneous layer. Here there is a great increase in thickness from increase in the number and size of the component elements—not a true hyperplasia, but an increase from a para-typical process, producing a thickening of this layer. This thickness is also especially present at the orifices of the sweat-ducts and hair-follicles. The changes in the rete and in the corium are slight in amount, and there is an entire absence of any actual exudation, emigration, or change to an embryonic condition of the fixed elements of the corium, conditions indicating an inflammatory process.

In papules which have existed for a considerable length of time there is a continuation of the processes observed in the recent papule and afterward retrograde changes leading to atrophy of the part, or there is a return to the normal condition by cessation of the pathological process.

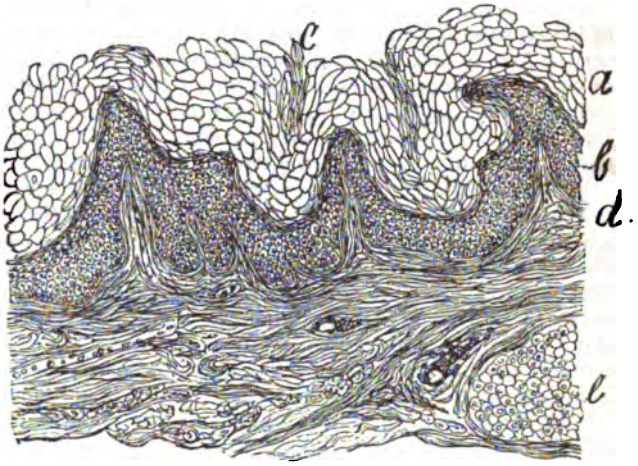

FIG. 2.—Vertical Section of a Papule of Lichen Ruber which had existed Several Weeks. (More highly magnified than Fig. 1.) *a*, corneous layer; *b*, rete mucosum; *c*, region of sweat-duct orifice; *d*, corium; *e*, unstriped muscle-bundle (from the lumbar region).

The corneous layer is much thicker than in recent papules, but the character of its elements as regards shape, size, structure, and chemical constitution remain the same. Coloring with carmine shows a number of them, especially in the region of the orifices of the sweat-ducts and hair-follicles, still contain a granular nucleus while others have a vesicular one. The free surface is not provided with the dry, flat, squamous cells observed in normal epidermis from this region. The rete mucosum is somewhat increased in size and from its upper portion it sends projections toward the free surface. This unevenness of its upper surface as seen in Fig. 2 depends but very slightly upon the rete, for we observe that where these projections exist the rete is not specially increased in thickness, as the cutis papillæ beneath these extend farther upward than elsewhere. As the papillæ are not increased in size, at least to any marked extent, and the rete above them is not thicker there than in other situations, it follows that the uneven upper portion of the rete is produced by the hypertrophied corneous layer. This hypertrophy of the corneous layer is greatest in the region of the orifices of the sweat-ducts and hair-follicles, and there the projections extend farthest downward. The rete

cells are not increased in size, but in many places are very small, a result probably of pressure upon them by the corneous layer. The granular layer and stratum lucidum are not well defined. The interpapillary portions of the rete are increased in size in some situations by slight growth downward into the corium. The cutis papillæ are but slightly enlarged, the enlargement depending upon the changes in the interpapillary rete; the papillary blood-vessels are somewhat dilated, and a few emigrated corpuscles are present outside the vessels. Some of the papillæ are diminished in length from the downward pressure of the rete and corneous layers.

The structure of the corium is normal except in the neighborhood of the blood-vessels. The majority of the blood-vessels are dilated and surrounded by a variable number of lymphoid corpuscles—emigrated corpuscles. The dilatation of the blood-vessels and the number of emigrated corpuscles is greater than in recent papules, but not sufficient to denote any active process. The unstriped muscle-bundles are always much hypertrophied, much more than in any other cutaneous disease. Some hair-follicles show hypertrophy of the external hair-sheath while others are normal.

In the central portion of old papules a retrograde process often occurs, consisting in a degeneration of the rete and destruction of a portion of the underlying corium. In some of my sections I found a separation of all the rete except the lowest layer of cells from the cutis. I am unable to describe the changes which led to atrophy of the part, as I did not remove any papules with atrophic centres.

Deductions.—In the examination of sections of papules of lichen ruber of recent or long existence, it will be observed that we find no liquid exudation; no emigration of white blood-corpuscles, except a few from the blood-vessels of the papillæ and upper part of the corium, the number of which increases with the duration of the disease; no change in the fixed elements of the part to embryonic conditions, that is, none of the characteristic microscopic appearances observed in a vascular tissue, which is the seat of an inflammatory process. The few changes observed in the papillæ are due to distention of the blood-vessels and consequent stasis, while the slight increase in size of some of them results from a growth downward of the interpapillary rete, a growth which is perhaps never the result of an inflammatory process. Some (Auspitz) maintain that there never is a hypertrophy of the rete, the result of an inflammation of the skin, but, I believe, that though it is an unusual occurrence, yet it nevertheless occasionally occurs in cases of chronic eczema. Dilated blood-vessels and the presence of emigrated corpuscles may also denote an inflammatory process in the skin, but unless this process is primary, and not secondary to other pathological conditions, the disease in which it occurs is not to be classed among the inflammatory or exudative affections. In many skin diseases that we know are not inflammatory in nature dilatation of the blood-vessels and emigration of white blood-corpuscles occur, but only as a secondary condition, as for instance, in ichthyosis and verruca. The changes in these two diseases, as regards dilatation of the blood-vessels and emigration of corpuscles, are secondary to other changes in the epidermis, and hence are not inflammatory diseases. If lichen ruber was an inflammatory disease, the changes in the corneous layer would require to be a secondary condition, and the result of nutrition changes consequent on the inflammatory process. We find, however, from microscopical examination, that the primary and principal changes occur in the corneous layer, that the other changes observed are slight in comparison with them, and, furthermore, that such changes as occur in the corneous layer, are, I believe, never the result of an inflammation.

From a clinical study of the papule there is also nothing in its mode of origin or appearance which makes it probable that the disease is an inflammatory one. The redness present is principally a hyperæmic redness, as shown by the absence of an inflammatory areola; there is no pus formation, no abscess, no vesicles, no erosion, no exudation upon the free surface, no inflammatory infiltration into the cutis, no pain; no increase of temperature, judging by the feel—in other words, the essential clinical characters of an inflammation are absent. It is true that a disease may be inflammatory in origin and consist of nothing but papules, as occurs in ordinary lichen or papular eczema, but in this case several of the above-mentioned clinical characters of an inflammation are present, and microscopical examination shows not only dilatation of the blood-vessels, but also exudation, emigration, and change in the tissue of the part. In the majority of cases of this papular eczema, also, papules are intermingled with vesicles or papulo-vesicles, whereas in lichen ruber the papules never become vesicles and never change in character, except to undergo revolution or atrophy.

From a consideration of these clinical and anatomical characteristics of lichen ruber it seems unjustifiable to classify it among the inflammatory or exudative affections of the skin, provided my observations on the anatomy of the papule in its different periods of existence, and views as to the conditions to be necessarily present to constitute an inflammatory process, be correct. The arguments advanced in reference to the clinical characters necessary to constitute an inflammation are similar to those held by Dr. Auspitz, and may be considered tenable.

The anatomy of the papule, as far as the condition of the corium and blood-vessels is concerned, does not differ much from that given by Neumann, although he regards the slight emigration as proof of an inflammatory process. A reference to his drawings will show how insignificant this emigration is compared even with that of the skin in scarlatina. I find that the principal pathological changes are present in the corneous layer, and that the changes in the other tissues are secondary and slight in amount. There is great increase in thickness in the corneous layer—a hypertrophy and an aberration in the process of horny transformation, as already described. Now the horny transformation is a complicated physiological and chemical process, and an excess or aberration of the process may occur without simultaneous changes in the rete. An excessive production of corneous cells may, by pressure upon the rete corpuscles, produce a super-nutrition of these corpuscles and consequent thickening of the layer as occurs in callosities. This continuous pressure upon the rete and underlying cutis, a pressure which increases in amount until the papule has reached its acme of development, is a sufficient explanation for the atrophy which occurs in the centre of old papules without the addition of an amyloid degeneration of the papillary blood-vessels as advanced by Biesiadecki, a condition which was, moreover, not present in my sections. The hypertrophy of the external root-sheath of the hair was absent in some of my sections as well as in those of Biesiadecki, and consequently cannot have the importance attached to it by Neumann. The hypertrophy of the unstriped muscle bundles, on the contrary, is evidently a constant condition and an essential part of the process of the disease.

In lichen ruber, then, we find that the principal pathological changes occur in the corneous layer, and that these changes consist in an increase in thickness from an excessive production of corneous cells and an aberration in the process of horny transformation. These changes occur especially in the region of the orifices of the sweat-ducts and hair-follicles. There is a digression from the normal physiological process of horny transformation—a keratosis, and a para-typical keratosis, a para-typical anomaly of horny transformation. It is shown to be a keratosis by the changes in the corneous layer being the primary and characteristic pathological condition, and to be a para-typical keratosis by the di-

gression from the normal process of transformation, as of the cells, as regards size, shape, structure, chemical constitution, and manner of being cast off. Lichen ruber, then, is not an inflammatory disease, but arises from a continuous collection of epidermic cells from an anomaly in the process of their production and casting off, and these cells, by pressure upon the underlying tissues, produce the other changes occurring in the rete and corium.

Prognosis.—The disease, if allowed its natural course, or is not treated by means of arsenic, invariably proves fatal, as shown by the result in the first fourteen cases under Hebra's care. When treated by arsenic in the manner recommended by Hebra, the disease can always be removed, unless the person is already in a very advanced stage of marasmus.

Treatment.—With the exception of arsenic there is no known preparation, either applied externally or given internally, that has any effect upon the course of the disease. Arsenic alone is to be relied upon, and if given in sufficiently large doses and its use persisted in the eruption will disappear. It is to be given at first in small doses, and the quantity increased every four or five days until the maximum dose which can be well borne by each individual is reached, and this dose continued until the eruption has disappeared, when smaller quantities should be given for three or four months longer. To abate the itching, baths or the application of fat substances alone or combined with carbolic acid, salicylic acid, or zinc may be employed, but, as a rule, are of little benefit.

(To be continued.)

ON SOME NATURAL MODES OF CURE IN EMPYEMA.

BEING THE ABSTRACT OF A CLINICAL LECTURE.

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GENTLEMEN: Most of you have seen what *Art* can do in the treatment of empyema, and I am thankful to say that, by the plan we now follow, of thorough drainage with a large canula and antiseptic dressings, we have had very fortunate results; but to-day I wish to call your attention to two cases which illustrate what *Nature* can do in the way of cure in this formidable affection. Left to itself an empyema may terminate as follows: 1, By perforation of chest-wall, of lung, and of diaphragm; 2, kill by septic or other influences; and 3, it may be absorbed or dry up. Of these three modes perforation is not very common either into the lung or externally, while into the abdomen it is very rare. Septicæmia claims no small proportion of fatal cases. Amyloid degeneration and tuberculosis kill not a few. Inspissation of the purulent contents and gradual absorption is perhaps the rarest of all terminations. A natural cure may take place by perforation of the lung or by the absorption of the pus, and of the three cases of empyema which you have had an opportunity of studying this session, two furnish illustrations of these modes.

Let us first study the case of the Swede who was discharged from Ward 11 a few days ago. The clinical report is as follows:

CASE I.—*Typhoid fever; empyema; expectoration of the pus; recovery.*—Christopher I——, aged twenty-three, a Swede, was admitted to hospital on March 26th with typhoid fever. The attack was moderately severe, but presented no special features. The chest was examined on admission, with negative results. Toward the end of April (28th) as the temperature kept up, and he had a cough with shortness of breath, the lungs were examined, and absolute dulness found at the right base, extending as high as the spine of the scapula behind, and the fourth rib in front. The breath-sounds were not audible, and both tactile and vocal fremitus were absent. A hypodermic needle was inserted, and about twenty minims of creamy pus withdrawn. Patient had no chills, no sweating; there was usually an evening exacerbation of temperature, two or three degrees, only once reaching 103°. It was decided to wait for a week before operating, and meanwhile to improve his general condition as far as possible. On May 1st, without any aggravation of symptoms, he began spitting up pus, and in the course of twenty-four hours filled the spittoon (capacity 26 ozs.). The cough was very troublesome, not paroxysmal, and the pus was brought up in rounded masses surrounded by clear mucus. *En masse* it looked like pure pus, but the isolated sputa resembled closely those of chronic phthisis. No elastic tissue was found; pus cells were the only elements. On May 3d the area of dulness was found to have diminished considerably, and at the angle of the scapula breath-sounds could be heard, distant on tranquil respiration, harsh and distinct on deep inspiration, and these accompanied by *very fine crepitant râles.*

For nearly three weeks the expectoration of pus continued, the amount at first large (15–22 ozs.), and by the 20th was reduced to a couple of ounces daily. The dulness gradually diminished, and by the 13th a comparatively clear note was obtained on the portion of the infra-scapular area next the spine. Breath-sounds weak but quite audible; moist sounds on deep inspiration. His general condition improved rapidly, temperature became normal, and he was discharged June 4th. A slight area of dulness remained in the outer part of the infra-scapular region. While under observation a loud, rough, systolic murmur developed, heard in the third and fourth interspaces to the right of the sternum; not at the apex or at the base. It was transmitted to the right base, and was first noticed during auscultation of this part.

I may safely say, gentlemen, that in no case which has been in the wards this session did we watch with greater interest the progress of the disease, and we can regard the result with equal satisfaction.

That an empyema may perforate the lung and be coughed up has been known for centuries; but a knowledge of the fact that this occurs without the development of pneumothorax, and constitute one of the most favorable modes of termination of the disease, does not appear to be very widely diffused. Hippocrates, indeed, knew of it, and in several places speaks of recovery from empyema (after pneumonia) by perforation of the lung and expectoration of the pus.

Traube[1] in an article, published in 1872, entitled "On a Natural Mode of Cure in Purulent Pleuritic Exudation," has called special attention to the fact, and mentions, as a curious circumstance, that he alone, of all the physicians who had written on empyema since Hippocrates, had observed it. In this, however, he was mistaken, for it had not escaped the notice of the Irish physicians in the palmy days of the Dublin school. Dr. Greene[2] narrated several cases of the kind, and the late Dr. R. L. Macdonnell, the first professor of clinical medicine in this school, and who was at the time clinical assistant to Dr. Graves, in his important paper "Contributions to the Diagnosis of Empyema,"[3] clearly recognized this group of cases.

There appear to be two ways in which an empyema may discharge through the lung; first, by opening into a bronchus and the formation of a fistula; and, second, by a local necrosis of the pulmonary pleura, exposure of the parenchyma, and a soakage of the pus through the spongy lung-tissue into the bronchi. In the first way pneumothorax usually develops and aggravates the danger. When the pus perforates by a large and free opening the patient may be suffocated by the sudden gush of fluid which is passed into the tubes more rapidly than it can be expectorated. Several cases of this kind are on

[1] Gesammelte Beiträge, Bd. iii., s. 44, 1878.
[2] Dublin Medical Journal, vol. xvii., 1840.
[3] Ibid., 1844.

record. The establishment of a bronchial fistula may be followed by temporary relief, but permanent recovery is rare. In the second way the pus is usually discharged without the formation of pneumothorax, and we must regard this as one of the most favorable modes of termination in empyema.[1] Traube was certainly the first to give a satisfactory explanation of the process, as he had an opportunity of studying the condition of the pleura and lung in one of these cases, and found on the lower lobe an oval area two and one-half by one inch with the pleura destroyed, and the lung tissue fully exposed, but no direct communication with the bronchi. That pneumothorax does not occur he explains in the view that while the powerful coughing efforts compress the chest, and are sufficient to drive the pus through the exposed lung tissue into the bronchi, the affected side is immobile, or nearly so, and the slight expansion during inspiration has not force enough to aspirate air into the pleura.

Greene, in the paper already referred to, clearly distinguishes between the two classes, stating that "in cases of effusion a copious and purulent expectoration is a frequent accompaniment, depending in some instances on a fistulous communication established between the seat of the collection and a bronchial tube, and that when such a communication has taken place it may be recognized by well-known and characteristic signs. But in other instances the expectoration may be equally copious and purulent, while all the physical signs of such communication are absent, and where, consequently, the symptoms in question cannot be referred to such a lesion." In the latter case he thought, as did also Dr. Macdonnell, that the pus was the result of a vicarious secretion from the bronchial membrane, the action of a sort of reciprocity between the serous and mucous surfaces. Dr. Macdonnell draws a very proper distinction between the symptoms in the two groups, which I think holds good in the majority of cases. When a bronchial fistula is established a large quantity of pus is expectorated with violent and sudden paroxysms of coughing, the quantity at times being so great as to cause suffocation; whereas when no distinct fistula is established, but the pus soaks through the spongy lung substance, the expectoration, though amounting to many ounces in the twenty-four hours, is spat up gradually and in small quantities at a time. This latter mode appears to be not uncommon, it is decidedly more frequent than the development of a bronchial fistula, and a large proportion of the patients recover, sometimes with great rapidity. We have had several instances in the hospital during the past few years, and when I mentioned the subject at the Medico-Chirurgical Society three or four instances were narrated by members. Perforation of a bronchus and the establishment of pneumothorax is not always fatal. Attimont, in his essay,[2] collected ten cases of recovery after expectoration of the empyema, and some of these were undoubtedly cases of bronchial fistula.

One other point in connection with this case is worth noting. You remember that when the effusion was disappearing, a very fine crepitant râle was heard with inspiration, at the angle of the scapula. It was as fine as, and resembled closely, the pneumonic crepitus. In two other cases of pleurisy I have observed the same phenomenon as the effusion was absorbed, and was not a little puzzled. Dr. Macdonnell, already referred to, also noted this, and described it in another paper, "On the Occurrence of Crepitus in Lung after the Absorption of Pleuritic Effusion."[3] Is it, however, in the lung? I mentioned to you at the bedside that it might be *pleuritic*, due to the contact and friction of the two surfaces after the absorption of the fluid, and if so it is in corroboration of the views of Dr. J. R. Leaming, of New York, who holds that the pneumonic crepitus is not a pulmonary but an interpleural sound, due to the friction of the sticky surfaces.

The patient before you, who has been in hospital a few days, illustrates a very different process, but one which is leading to a satisfactory termination.

CASE II.—*Empyema of seven months' standing; absorption of the fluid with retraction of the chest; local perforations of the pleura and subcutaneous abscesses.*—A. B——, aged twenty-three, from the Eastern Townships, of good stock, and always strong and healthy. Gives the following history: Quite well until November last, when, while lifting a heavy stone, he felt a stabbing pain in the right side, which continued at intervals for two weeks, during which time, however, he was able to get about and do work. He then took to bed, got weak and feverish, particularly at night. Had chills, and often sweated a great deal. Slept on the left side as a rule; when on the right the pain was increased. Had a cough through the winter; not much expectoration. Lost flesh rapidly. Has not been confined to bed all the time, but got up and went about when he felt able. Latterly he has been improving, cough has disappeared, has no fever or sweats, and thinks he is gaining flesh.

The history points to some chronic chest trouble. When stripped for examination he presents an exceedingly interesting object for clinical study. General inspection shows a tall, bony man, pale and emaciated, and the attention is at once attracted to the lobsided appearance of the body, due to a marked depression of the right shoulder and a decided flattening and shrinkage of the right half of the chest. As he breathes quietly you observe that while the left side expands the right is absolutely immovable, and this is still more marked when he takes a full breath: the left chest expands to an unusual degree, the infra-clavicular and mammary regions swelling out in a striking manner, while the right side remains fixed. From behind the same, flattening and want of movement are noticeable. Closer inspection shows very narrow intercostal spaces on the right side, and in the infra-axillary region there are two flat swellings in the seventh and eighth spaces, and in the latter, also, a fresh cicatrix. The apex-beat can be seen in the fifth space close to the edge of the sternum. There is a croton-oil rash on the front of the chest. Palpation reveals more distinctly the narrowing of the intercostal spaces; the ribs do not appear hypertrophied. The small flat tumors in the seventh and eighth spaces fluctuate, and do not appear to communicate with each other. He states that one has already disappeared, and a fourth was opened and discharged about a spoonful of pus. He has noticed them for a couple of months. Tactile fremitus is marked in the upper part of the right side; below there is no special intensification. The edge of the liver can be felt at the costal border. Mensuration shows the right half of the chest to be nearly an inch smaller than the left, not as much as you might suppose on inspection, but the eye is in this matter very apt to be deceived. Percussion gives in front, on the right side, a flat, somewhat tympanitic note as low as the nipple, flat below this, and absolute dulness behind. The left lung is everywhere resonant. On auscultation, the breath-sounds are absent in the dull regions below, feeble in the supra-scapular and infra-clavicular regions, and on deep inspiration a few râles can be heard. Vocal resonance is much intensified on right side, particularly in places. The examination of the abdomen reveals nothing special; the liver is not enlarged. General condition during the three days he has been in hospital has been good. Eats and sleeps well; has no fever; pulse about 80. A needle was thrust into the eighth interspace behind, but no fluid was obtained. There is laudable pus in the small flat tumors. He does not wish them opened, and returns home to-day. With good food, fresh air, and tonics, he will continue to improve. If the small abscesses remain, his attending physician will open them, but they may disappear, as one has already done. He

[1] Loc. cit.
[2] Considerations sur les Résultats de la Paracentèse, etc., 1869.
[3] Dublin Medical Journal, 1845.

will recover, with a damaged lung and shrunken side; but with compensatory enlargement of the left, and a gradual improvement and distention of the upper part of the right lung the respiratory area will be amply sufficient for the purposes of an ordinary life.

As to the diagnosis in this case—could you mistake it for anything else? The only other affection which produces a somewhat similar condition is fibroid phthisis or cirrhosis of the lung, in which there may be the depressed shoulder, flattened and contracted chest, with immobility, dulness, and weak breathing, but the history would be one of long-standing lung trouble, and there would be cough, expectoration, and special auscultatory signs. With the local abscesses perforating the intercostal spaces, the diagnosis in this case is, at present, easy enough; but some years hence, when these have disappeared and nothing is left but the retraction, dulness, and feeble breathing, it might not be so easy without a full history. The condition of this man's chest illustrates in another way what nature can do in effecting a cure when an empyema is not interfered with. The effusion has evidently been pretty copious, and as the weeks and months elapsed became more concentrated and has gradually been absorbed, until now there is probably not more than a few ounces left. With the disappearance of the fluid another change has gone on; the flaky membranous exudation covering both layers of the pleura has become organized and converted into a dense fibrous tissue which may have a thickness of from half to one inch. In the process of absorption pockets of pus may have been left between the thickened pleural membranes, and sometimes this pus becomes caseous or even cretaceous. The angle between the costal and diaphragmatic layers of the pleura may be filled with a wedge of solid fibro-cartilaginous tissue which defies all attempts to separate it from lung or diaphragm. The firmness of these old pleuritic membranes is extraordinary, and in the removal of the lung, in such a case, the only way is to strip off the costal layer and take the attached portion of diaphragm. The dulness in front and behind in this patient's right side is due chiefly to these thickened membranes, and corresponding to the seventh and eighth interspaces there are small pockets of pus, perhaps isolated, as they often are, and communicating by sinuses with the small external tumors. The lower lobe of the lung is condensed and airless, the upper and middle lobes, though thickly coated with false membranes, probably contain a good deal of normal and functionally active tissue. What produces the great deformity? When a sero-fibrinous fluid is absorbed, or after its withdrawal by aspiration, the lung expands, and although, as you have had several opportunities of observing, for months after there may be basic dulness and defective expansion, there is no retraction. In chronic pleurisy, however, the serous layers are unusually thickened, the false membranes organize, and there is produced a large amount of new connective tissue, which gradually shrinks, prevents the expansion of the lung, and little by little drags in the side, narrows the intercostal spaces, pulls down the shoulder, may curve the spine, and displaces contiguous organs, drawing the heart over and the liver up, until there is presented such a typical condition of *rétrécissement thoracique* as exists in this case. Although the shrinkage and condensation of the organized membranes play the most important part in the process, some share must be attributed to other agencies, such as posture—the patient favoring the affected side—atmospheric pressure, and muscular contraction. Will this side ever expand again? Not to its full extent or near it. In time the upper regions of the lung will dilate more fully and there will probably be some movement in the anterior part, now absolutely quiet, but the deformity will remain and the lower part of the right side will never expand. It is true that occasionally a remarkable amount of expansion may take place after a *pleuritis deformans*. Sir Thomas Watson refers to two examples of complete re-expansion of the side, contracted after chronic pleurisy, but such cases are extremely rare.

Perforation of the costal pleura and the formation of a subcutaneous abscess constitute the condition known as *empyema necessitatis*, which is not often seen. In this instance the external collections are small, and probably connected with encapsuled *deposits* within the pleura. One has already disappeared, and a second, which was opened, healed rapidly, and the two which remain are not connected with each other, and probably not with any large amount inside. There are two or three points of interest about *empyema of necessity* to which I will refer as you are not likely to see another instance of it for some time. When it breaks, or is opened, the fistula which forms may remain for years and be difficult to heal. There is a case on record of one Dr. Wendelstadt, a Bavarian, who had such a fistula for over thirteen years and enjoyed fairly good health. Necrosis and caries of the ribs are apt to occur and retard recovery, as the sinuses which result run in various directions and are very difficult to heal. A case of the kind occurred a year or so ago in the practice of Dr. Rodger, of this city, and at the autopsy we found the skin and pleura of the antero-lateral region on the left side riddled with sinuses communicating with carious ribs and small pockets of pus within the thick layers of false membrane. Occasionally in *empyema necessitatis* the external tumor pulsates synchronously with the heart, and might be mistaken for aneurism. This was the result of a communicated cardiac pulsation, and was first described by Dr. Macdonnell, in the paper already referred to, and not by Dr. Walshe, to whom the credit is usually given.[1]

Progress of Medical Science.

KAIRIN, THE NEW ANTIPYRETIC.—We have already called attention to a newly described drug, which has been italicized by Hallopeau as that which "of all antipyretic agents is in non-toxic doses the most certain, the most powerful, and the most rapid in its action." This drug is a methyl hydrate of oxyquinoline, having the formula $C_{10}H_{12}NO$. It is derived from quinoline and exists under two forms known as *kairin* and *kairin M.*, the latter being that which has been most extensively used. It was first introduced to the notice of the profession by Dr. W. Filehne, Professor of Physiology at Erlangen, who asserted it to be a most powerful antipyretic, not only in typhoid and other continued fevers, but in all febrile conditions, including pneumonia, phthisis, and acute rheumatism. The drug exists in the form of a grayish-yellow, crystalline powder, easily soluble in water, and of a bitter, aromatic, somewhat disagreeable taste. The method of giving it, as described by Filehne, is as follows: Doses of thirty to fifty centigrammes must be administered every hour or hour and a half. After the first dose, the temperature falls about one degree, and after the third or fourth dose, it has reached the normal. The defervescence is accompanied with sweating, but the pulse remains full and the patient feels well. If now the drug is at once discontinued, the temperature rapidly rises, and the patient very likely experiences a chill. In order to prevent this, the kairin is continued in smaller doses of twenty-five centigrammes, frequently repeated, *i.e.*, as often as every three-quarters of an hour. The temperature then slowly rises, but with no disagreeable symptoms. In feeble subjects smaller doses (six to twenty-five centigrammes) will produce apyrexia, while in others even larger amounts than those first named are required. The drug appears generally to be well tolerated, but it sometimes causes vomiting and headache. It is eliminated by the kidneys and gives the urine a green color. Since Filehne's first article it has been used

[1] The mistake has arisen from the fact that Dr. Walshe has described two remarkable cases of intra-pleural pulsating empyema.

by several other observers, who all confirm the first statements regarding its powerful antipyretic effect. Freymuth has made some particularly interesting studies of its action in relapsing fever. He found that although it rapidly reduced the temperature it had no effect upon the movements and form of the spirilli, showing that the production of apyrexia and the destruction of the infecting germs were two different things. Given in proper doses, the relapses could be prevented. Freymuth found, however, that in several cases, gastric disturbance and prostration were so great that the remedy had to be discontinued. Hallopeau has recently announced his experience with kairin. He employed it in two cases of lobar pneumonia and in one of phthisis. Temperature charts are given, showing that the drug acted rapidly and powerfully in all these cases, and Hallopeau thinks its remarkable antipyretic power to be demonstrated. The question whether the apyrexia thus produced is always desirable is another matter which still remains to be settled. Filehne has recently made two further communications in which he gives directions as to the dosage of kairin, and states that there are two very similar bodies, kairin and kairin M. The latter, has, as we mentioned, been chiefly used, but Filehne believes the former to be somewhat more enduring and agreeable in its actions. Still more recently, Guttmann has reported his experience with kairin M. to the Berlin Medical Society. He had employed it in seventy cases. His experience confirms in a measure that of previous observers, but he does not speak with enthusiasm as to its effect upon the course of the disease. Riess, who has used kairin in eight cases, thinks it of less value, on the whole, than quinine or salicylic acid, but he admitted that his experience was too limited for him to speak positively.

Antagonism between Paraldehyde and Strychnine.—Professor Vincenzo Cervello concludes from a series of experiments made upon animals that paraldehyde will prevent the appearance of toxic symptoms of strychnine if it is given before they have manifested themselves, and will cause them to subside if they have already appeared. This antagonism is manifested in any case, whether the paraldehyde be given before or after the strychnine or at the same time with it. But the converse of this does not appear to be true. Strychnine seems to exert little or no influence over the narcosis of paraldehyde. The phenomena caused by the latter drug seem to predominate, the only effect of strychnine being a retardation in the appearance of the paraldehyde symptoms. From another series of experiments, the author was led to think very highly of paraldehyde as a narcotic. The drug, in his hands, always caused a tranquil sleep, preceded by no period of excitement, during which the respirations were quiet and somewhat slower than normal. The patients complained of no headache, nausea, or any other unpleasant symptoms upon awakening from the paraldehyde sleep. Professor Mascelli has met with like favorable results in his use of the drug. He has employed it in over three hundred cases of neuralgia, mental diseases, and other affections in which insomnia was a distressing symptom, and has found great satisfaction in its use.—*Bulletin Général de Thérapeutique*, August 30, 1883.

The Rational Treatment of Dysentery.—In an article of some length in the *Bulletin Général de Thérapeutique* of June 15, 1883, Dr. Kobryner enters a protest against the so-called specific treatment of dysentery by ipecac. He thinks that this drug is seldom of any value in the treatment of this affection, and that often it does positive harm. The proper treatment, he thinks, consists in fulfilling the indications presented by the disease, and not in the routine method, based on pure empiricism, of forcing down immense doses of ipecacuanha. There are, he argues, five special indications to be followed in the treatment of the grave forms of dysentery. The first is to rid the patient of everything that may aggravate or keep up the morbid condition. This end is to be attained first by the administration of an emetic. In the milder cases this is not necessary, as the onset of the disease is usually preceded by a longer or shorter period of general malaise, when there is but little appetite. The patient eats only a little light food, and the stomach consequently is nearly or wholly empty. In dysentery of severe type, on the contrary, especially in times of epidemic, the invasion is sudden, and the patient may be seized shortly after the ingestion of a full meal. The process of digestion is suddenly arrested, and the stomach must be relieved of its load as speedily as possible. Then the rest of the digestive tract requires attention. The intestines are filled with a quantity of fecal matter which must be got rid of. This is to be accomplished by the administration of any of the ordinary salines or laxative mineral waters. In mild cases this is all the treatment usually required. The second indication is to moderate the fever. This end Dr. Kobryner attains by a restricted diet. When the fever is high the fast must be absolute, but as soon as it begins to fall some light soup may be allowed. Solid food is not allowed until the patient is absolutely free from fever. Infants at the breast may be permitted to nurse, but must take only a little milk at a time. They should not be urged if they refuse the breast. In bottle-fed infants, milk is not allowed, but they can have only light broths and a little albumen and water. The third indication is to relieve the colic. While opium is the specific for pain, it is not to be thought of in dysentery. Notwithstanding all our efforts to unload the bowels, it often happens that hard fecal masses are expelled from time to time, and if opium is given they are retained and increase the irritation. The remedy for the colic of dysentery is calomel. In spite of its ordinary action in increasing the intestinal discharges, it relieves the pain, and, in this case, diminishes the number of the dejections. The fourth indication is to restore the blood to its normal richness. This is a most important part of the treatment, and is best accomplished by perchloride of iron in doses of eight drops per diem for nursing infants, and a proportionate amount for older patients. In addition to this may be given a drink of white of egg in water (the whites of six or eight eggs to a quart of water). It is not until the sixth or seventh day that the signs of impoverishment of the blood become evident, so that the treatment by iron and albumen is not to be begun until that time. The last indication, which is met with in only a certain proportion of cases, is to treat the intermittent character of the symptoms. Quinine is the remedy here.

Gangrene of the Lower Extremities from Obliteration of the Abdominal Aorta.—Dr. Gyselynck reports in the *Archives Médicales Belges*, for August, 1883, the case of a man, twenty-three years of age, admitted to hospital suffering from palpitation of the heart following an alcoholic debauch. The pulse was beating about two hundred times a minute, though it was impossible to count it exactly. There was oppressed breathing and slight cyanosis. There was no improvement for five days, notwithstanding an active treatment by digitalis and blood-letting. At the end of this time the pulse suddenly fell to 64, but was intermittent. There was at this time a coldness of the feet and legs with anæsthesia. The coldness continued, gangrene of the entire lower extremities ensued, and the patient died after four weeks of suffering. At the autopsy, the abdominal aorta was found completely obstructed by a large clot situated a little above the bifurcation. There was an ulceration of the inner coat of the artery in this situation, and the supposition was that the thrombus arose from a deposition of fibrine and leucocytes at this point.

The Mental Condition of Certain Diabetics.—In some subjects of diabetes, states *Le Practicien*, certain changes in the moral nature are so marked as to point to a correct diagnosis before an examination of the

urine has been made. A young man who, in consequence of this disease, has lost his virile power will state the fact of his impotence to his physician with a sort of indifference, very different from the anxious fear displayed by the hypochondriac under like circumstances. At a more advanced stage of the disease, when the quantity of sugar in the urine is considerably augmented, the mental state changes. The patient becomes sad and is the prey of hypochondriacal forebodings. His character changes; from being free and open-hearted he becomes morose and moody, speaks but little and smiles less. He becomes parsimonious, and tries to cut down the expenses of his household, begins to keep exact accounts, calculates his resources, and declares that he is ruined and that his family will die in the poor-house. The man of middle age who, without apparent cause and without exhibiting any other mental disturbance, becomes all at once avaricious and presents delusions of rapidly approaching financial ruin, is most frequently a diabetic. If these melancholic forebodings continue, and if on examination the presence of sugar in the urine is established, the chances are that the patient will end his life by suicide. In the later stages, after the disease has existed for some length of time, still another mental condition is noted. The patient is lazy and wants only to be let alone; he will spend hours sitting in his arm-chair or lying on his lounge in a state of complete mental and bodily inactivity; his mind is clear, and his intelligence is unimpaired, but he is apathetic, he has no desire to walk or to talk, and seeks no occupation. Later, while preserving all his mental faculties intact, he begins to indulge in soliloquy, and relates incidents and recalls old memories to himself in an undertone. Finally, he falls into a state bordering on marasmus, and is carried off usually by that most grave of the complications of diabetes—pulmonary phthisis.

Cerebral Disease following Poisoning by Illuminating Gas.—A man, fifty-six years of age, of previously good health and free from hereditary taint, was asphyxiated by coal gas. He recovered from the physical effects, but suffered from insomnia, weakness of memory and depression, and was unable to pursue his former occupations. Later, he had auditory illusions and refused to take food. The only motor disturbance was a facial paresis on the right side. Toward the end the patient was ataxic and had a tendency to fall forward while walking. Death was sudden and resulted from a fracture of the ossified thyroid cartilage. The autopsy revealed a spot of yellow softening, the size of a bean, in the corpus striatum on each side. This involved the inner portion of the nucleus lenticularis and the internal capsule. Dr. R. Gnauck, who reported the case (*Wiener Medicinische Wochenschrift*, September 1, 1883), regards as worthy of note the fact that such a lesion gave rise to no marked motor disturbances. He states that three other cases have been reported by Lesser of a similar lesion due to a like cause.

Low Temperature in Cachectic Conditions.—Dr. P. Lucas-Championnière relates in the *Journal de Médecine et de Chirurgie Pratiques* for September, 1883, the case of a child suffering from erysipelas, in which there was not only no fever, but even a notably reduced temperature. The thermometer registered only 91.5° F. He calls attention to the case as illustrating a fact of considerable importance, namely, that in certain cachectic conditions, inflammatory affections which are ordinarily accompanied by considerable fever may run their course without determining any such reaction, or may even provoke a reduced temperature. One should not, therefore, be prevented from making a diagnosis in such a case because of the absence of fever.

Chromic Acid in Affections of the Mouth.—Dr. Cauquil, writing to the *Bulletin Général de Thérapeutique*, No. 12, vol. civ., concerning the employment of chromic acid, as recommended by Dr. Butlin in diseases of the tongue, states that he has also found it of value in stomatitis. He has used it with success in mercurial sore mouth, in the strength of one to five. In other cases of syphilitic pharyngitis with hypertrophy of the tonsils he has obtained good results with the same solution.

Inheritance as a Cause of Drunkenness.—In support of the theory of the hereditary transmission of the thirst for alcohol, Dr. J. S. Jewell related the following remarkable instance at the meeting of the California State Medical Society (*Pacific Medical and Surgical Journal*, September, 1883): The patient was the third son of his parents, and was sorely afflicted with alcoholism. He stated to Dr. Jewell that himself and younger brother (the fourth son) had always, almost from infancy, been too fond of liquors, while his two elder brothers were strong total abstinence men, and never touched liquor; the latter were also men of wealth, while the younger, who were inebriates, were poor. He said that he had often heard his mother say of his father, that during the first five years of their married life he (the father) did not use liquor in any way, and would not associate with men who did. But about the fifth year after their marriage, about the time the third son was begotten, the father had many business reverses, took to drink, and died after being an habitual drunkard for several years.

Dislocation of the Humerus from Sneezing.—Dr. William Rickert reports in the *Maryland Medical Journal*, for September 29, 1883, the case of a man, who while cleaning a house, felt an inclination to sneeze. He stopped work and, raising his left arm above his head, supported himself with the other hand against the side of the stable. While in this position he sneezed, and immediately felt that something was wrong with his shoulder. Examination showed an infraclavicular luxation of the head of the humerus, which was quickly reduced under anæsthesia.

The Pathological Changes in Gonorrhœa.—Professor Hamilton, of Aberdeen, has had an opportunity to examine microscopically the condition of the urethra in acute gonorrhœa (*The Practitioner*, September, 1883). The epithelium of the urethra is disposed much as in the bronchus, in three strata—the deepest of flat cells, the middle of pear-shaped cells, and the superficial of columnar cells. In acute gonorrhœa the process consists mainly in an exaggerated and irregular proliferation of the deeper strata of cells, the cell-production being so rapid that the discharge contains but few of the fully developed columnar forms. The denudation of the surface in this process explains the scalding pain on micturition. The secretion of the mucous glands is increased, as in bronchial inflammation. There is also considerable corpuscular infiltration of the mucous membrane, leucocytes being accumulated in the sub-epithelial lymphatic spaces; and although there does not exist an elastic basement membrane, which, according to the author, prevents the escape of these interstitial products on to the free surface in bronchitis, he nevertheless doubts if that occurs here, believing rather that the cellular exudations in the meshes of the mucosa are carried away by the lymph stream. There was not in the specimen any marked congestion of the blood-vessels; and the trabecular tissue of the penis was not abnormal unless accumulated leucocytes in the cavernous spaces may be so considered. Strictures are produced in chronic urethritis probably by the submucous tissue becoming cirrhosed and contracting upon the lumen; the absence of "fixed joints" indicating the difference in results from chronic bronchitis when the tubes are dilated. The tubules of the testicles and of the epididymis from the same case also showed marked catarrhal inflammation, being filled with débris and epithelial cells in all stages of disintegration, but there was no interstitial inflammation whatever.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 20, 1883.

TRANSFUSION OF BLOOD AND INTRA-VENOUS INJECTIONS OF SALINE SOLUTIONS.

TRANSFUSION of blood seems to have originated with Lewer, of England, whose work, about the year 1666, records several experiments performed on dogs, into whose veins arterial blood from other dogs was made to flow by direct communication of the divided vessels. In 1667, Emmerez, of Montpellier, France, performed transfusion on a patient of Denis, injecting into the vein of the sick man nine ounces of lamb's blood; the patient was in extreme prostration from typhoid fever, but recovered; his recovery being attributed to the operation. In 1668, transfusion was performed in Italy, by Fracassati, Riva, and Manfredi, on human subjects, the donors of blood being healthy men. The first signal successes of transfusion awakened great hope in the operation, and it was speedily resorted to for a great variety of disorders. In accordance with the prevalence of humoral theories of pathology it was supposed that the whole mass of the blood might easily be renovated by supplying to the diseased individual the pure blood of healthy men, or even animals; even madness, it was alleged, might be successfully combated by transfusion. As a result of this infatuation the practice was speedily abused, was continually followed by disaster and death, and leagues were formed against it. In 1675 transfusion was proscribed in France by an Act of Parliament. For almost a century and a half transfusion was completely abandoned, to be taken up anew about the year 1815 by Blundell, who recommended it in cases of extreme debility from hemorrhage or wasting disease. Blundell, whose "Researches, Physiological and Pathological, on Transfusion," appeared in 1824, advised to perform the operation by means of a syringe which should take up the blood from a cup into which it was made to flow, and inject it directly into the vein of the patient. Dieffenbach, in 1828, was the first to employ the terms mediate and immediate transfusion; *mediate*, when it is done by means of a syringe, and *immediate* when the artery of one animal is made to communicate directly with the vein of another animal. He was also the first to use defibrinated blood. Since then the operation has been very much perfected by means of the instrumental apparatus of Moncoq and Belina, as improved by Charrière, Collin, and Mathieu. These, however, have the disadvantage of allowing air to be admitted to the blood of the donor before it is injected, an evil which is remedied by the more complex transfusion instruments of Schliep, Neudorfer, and especially Roussel.

It is not our purpose in this article to discuss the advantages or disadvantages of transfusion of blood. Suffice it to say that experience has proved that whether whole blood be used or defibrinated blood, serious accidents may result from the operation, however great the care and expertness of the operator—and death has not seldom happened while the transfusion was going on from blood-clotting, or from the penetration of air. It has been shown that but a small part of the product of transfusion can be assimilated; the globules of the donor of blood, whether animal or man, rapidly undergoing dissolution in the serum of the individual whose circulatory system became their new habitat. Ponfick and Sardois have shown that this solution is the more rapid, the greater the difference in the animal scale between the species whose sanguinous fluids are mixed. Veritable embolic infarctions are likely to occur from the agglutination of heterogeneous corpuscles. Despite every precaution air will sometimes penetrate along with the blood, although this accident is much less likely to happen with the improved modern apparatus above mentioned. Fever, hæmaturia, even albuminuria have followed cases which proved successful—an expression of the difficulty which attends grafting one kind of blood on another. Even defibrinated blood is not free from these dangers. Landois has shown that whipping blood to free it from fibrin does not, to any great extent, clear it of corpuscles, and De Christoforis affirms that the globules remain whole and sound notwithstanding the beating. To obviate the inconveniences and dangers from the use of blood, whole or defibrinated, intravenous injections of milk have been proposed, and of saline solutions. The intravenous injection of milk has a curious and instructive history of its own, which we have not time now to pursue. Suffice it that it has been attended with several remarkable successes, as practised by Hodder, Joseph W. Howe, T. Gaillard Thomas, Wm. Pepper, and others, and is believed to give as satisfactory results as transfusion of blood. At the same time it is by no means free from danger, and Culcerq has shown that the fatality attending these injections is due to the formation of fatty emboli, from agglomeration of the milk-corpuscles.

The intravenous injection of saline solutions has of late come into vogue as a safe and efficient substitute for transfusion of blood. This practice originated with the earnest attempts of physicians to combat the cholera during the epidemic of 1830. Janichen, of Moscow, Latta, of Scotland, and Magendie, of France, are credited with having successfully performed saline transfusions about this epoch. It was believed, and the result justified the theory, that the algidity and other fatal accidents of cholera were due to the too great elimination of serum in the stools, hence the indication presented itself to inject an artificial serum to supply the place of the serum that was lost. These saline injections have been practised in Asiatic cholera more or less often since that period; sometimes successfully, at other times with only a passing amelioration, but nothing has ever occurred to indicate that any danger attended their use.

This very year Dr. O. Jennings, of London, has taken up the subject in an able monograph on transfusion,

urging the general introduction of intravenous saline injections in all cases where heretofore transfusion of blood has been supposed to be indicated. A year or so ago Bischoff reported a case of post-partum hemorrhage, where the patient, in a state of complete collapse from loss of blood, was restored by the injection into the peripheral extremity of the divided radial artery of two hundred grammes of a six per cent. solution of common salt. This solution was rendered alkaline by the addition of two drops of liquor potassæ. The injection was slowly made, the whole time occupied by the operation being an hour. During the transfusion the patient, previously cold and moribund, revived, the pulse came back, and at the end of the transfusion was only 122 per minute. There was no symptom of oppression, such as is generally witnessed during the transfusion of blood.[1]

This very year Szamann has reported a similar case, in which the intravenous transfusion of a weak saline solution, made slightly alkaline by a little liquor sodæ, undoubtedly rescued a woman from the agonies of death from uterine hemorrhage.[2]

From the *Bulletin Gen. de Thérapeutique* (tome cv., 3d liv., p. 125) we obtain the details of an interesting case reported by Heyden, which is very similar to those of Szamann and Bischoff above referred to. A glass funnel was used, connected with a simple gutta-percha tube, ending in a metallic canula, which was made to penetrate the median vein, in which it was tied. In the space of five minutes fifteen ounces were injected of a saline solution consisting of six grammes chloride sodium, twenty drops of liquor sodæ, and one litre of distilled water. (This is the solution of Schwarz.) A period of calm followed in which the pulse regained its force and became slow, and the extremities became warm. In the course of an hour the patient (previously unconscious) came to herself, and made a rapid recovery.

The credit of this method of transfusion of saline solutions has been wrongly assigned to both Little and Schwarz, who really did nothing but improve on an old method. The merit of Schwarz consists in having based this operation on a special theory of the action of the transfused liquid, which experience has confirmed. This theory is succinctly set forth by the review writer in the number of the *Bulletin de Thérapeutique* above alluded to. In cases of profuse hemorrhage the resulting fatality has been attributed to the loss of the requisite number of blood-corpuscles. The oxygen of respiration, not finding a sufficient number of carriers, reaches the nerve-centres in far too small proportions, and life was extinguished, with the heart's action, from want of oxygen. Such being the theory, it was natural, in order to remedy these accidents, to supply new globules to the blood; hence transfusion found justification. The corpuscular element was the useful and all-important one.

The blood-corpuscle, says Schwarz, is in no sense the useful element in transfusion, and he has proved it by bringing to life numerous hares bled to syncope by injecting into their veins the solution whose formula we have given above. The useful element is the vascular tension; the heart does not perform its function, does not contract unless a sufficient quantity of fluid is poured into its cavities, and this fluid must be under a pressure sufficient to bring into play the contractile energies of the heart. Inject, then, into the venous system an alkaline liquid homogeneous with its serum, and re-establish the vascular tension, you will restore activity to the circulation and will prevent the production of fatal accidents. According to Schwarz, then, it is not the quality of the liquid injected, but the quantity which is of real importance.

If the theory of Schwarz shall prove to be true (and the facts which are above given are strikingly demonstrative), a great future is in reserve for the intravenous injections of saline solutions, which must supersede the more ancient sanguineous injections; such transfusion being attended with much less difficulty and less danger.

[1] Centralb. f. Gyn., 1881, p. 545.
[2] Berliner klin. Woch., July, 1883. Med. News, August 25, 1883.

THE TRANSMIGRATION OF BACTERIA FROM THE MATERNAL TO THE FŒTAL CIRCULATION.

Considerable attention has been called of late to the possibility of the passage of micro-organisms from the maternal blood to that of the fœtus through the placenta. Truzzi and others have published the results of some experiments made by them in vaccinating pregnant women to determine whether the children born of them would be likewise protected. They found, however, in every case that the children responded readily to vaccination performed a few days after birth, thus demonstrating either that the micro-organism of vaccinia was unable to pass through the placenta, or else that it was so modified in its passage as to have lost its power of reproduction. It has further been shown that the placenta offered an impassable barrier to mineral substances reduced to a very fine powder and introduced into the maternal circulation.

The motionless rods characteristic of malignant pustule have never been found in the blood or other tissues of a fœtus taken from a woman dead of this disease. But in the affection called *charbon symptomatique*, the bacteria in which are endowed with independent movements, the transmigration through the placenta has been ascertained to occur. Dr. Chambrelent, of Bordeaux, in a series of experiments conducted in the laboratory of the *Faculté de Sciences*, has studied the action of the extremely minute bodies described by Pasteur as characteristic of chicken cholera. These organisms, according to the latter, resemble very closely in their size and characteristics, the microscopic granules of small-pox and vaccinia. His method was as follows:

A culture fluid, whose extreme virulence was previously determined by experiments upon a chicken and a rabbit, was used in the inoculation of a number of pregnant rabbits. The animals all died within twelve hours. Other rabbits and chickens were then inoculated with blood taken from the fœtuses which were carried by the poisoned rabbits. The results were not uniform. The presence of the characteristic granules in the blood of several of the fœtuses was incontestible, and inoculations of this fluid brought about a fatal result. But death in these cases was longer delayed than when the blood of the mothers was used. Others of the fœtuses seemed to be unaffected, as inoculations practised with their blood and with culture fluids made from it were followed by negative re-

sults. M. Chambrelent concludes from these experiments that the microbes of chicken-cholera may pass through the placenta, but that they are contained in much smaller number in the blood of the fœtus than in that of the parent. As regards the latter part of his conclusion, the question remains whether this diminished number is due to the partial barrier offered to their transmigration by the placenta or whether the fœtal blood is a less suitable fluid for the reproduction and multiplication of the microbes. According to a writer in the *Gazette des Hôpitaux* it would seem that the latter solution is the correct one. For it is not so much an explanation of the reduced number as of the retarded action of the microbes that is sought for. The action of a small number of micro-organisms in a given fluid is as speedy as that of a large number, provided their virulence be unimpaired. The cause of this modified virulence he finds in the diminished proportion of oxygen contained in the fœtal blood. The microbes of chicken cholera, as those of variola and its allied affections, require a large quantity of oxygen for their full development. This they cannot obtain in the fœtal circulation, hence their attenuation in this fluid. This theory might serve also to explain the failure of Truzzi's experiments with vaccinia. It was not the placenta that impeded the passage of the microbes, but the blood of the fœtus that refused them sustenance. The variolous organisms, already profoundly modified and weakened before their introduction into the maternal circulation, found no incentive to development in the poorly oxygenized blood of the fœtus, and hence became inert and died. Very different is the action of the fully developed microbe of small-pox, which so often kills the fœtus even though it spares the mother. It is strong, and its development is not entirely repressed for want of air.

If this theory be correct, the question suggests itself whether it would not be possible, through culture in an atmosphere rich in oxygen, to restore the strength of the cow-pox granules so that they would again produce variola.

INCINERATION.

In an article in the September number of the *Princeton Review*, Mr. John D. Bengless has presented, in an able and candid manner, the arguments in favor of cremation. The United States Cremation Company has republished this article and is using it in the propaganda of its faith.

The arguments presented by Mr. Bengless are not new, but perhaps the economical side of the matter has not been presented so forcibly heretofore. The total average cost of burial in New York City is estimated to be not less than two hundred and fifty dollars, while the expense of cremation will be only about sixty dollars, including an urn and a niche in the Columbarium. Mr. Bengless also affirms that there will be no trouble in cremating all the dead of large cities by means of the "octuple crematory" of Bombay, or the "multiplex portable incinerator" of Brussels, which we confess are new terms in mortuary technology.

We have said before that cremation has not taken well in this country, and that there was nothing to deplore in the fact. It can doubtless be made a useful mode of disposing of the dead in many cases, yet we do not think that either sanitation or sentiment demand it; and in many parts of the country it will be a long time, if ever, before it can be made practicable or economical.

TRAINED NURSES FOR THE COUNTRY.

We have received a letter from a correspondent calling our attention to the need of trained nurses for the country. It is urged that neither country physicians nor their patients yet appreciate the help they can receive from this class of persons.

It cannot be doubted that more and better nurses are needed and could be employed in the rural districts and small towns. It takes some time for the profession and the public to be educated up to an understanding of the increased effectiveness of medical skill when assisted by intelligent nursing. Still this knowledge is rapidly growing, and perhaps as fast as could be expected. We have already over twenty training schools in this country which are yearly sending out numerous graduates. These for the most part remain in the cities, where the pay is better and employment more regular.

It will not be long, however, before our cities are supplied, and we believe that the country will furnish an excellent field. The pay here must be smaller, but it will be more than is usually paid for teaching the district schools, and the expenses of living make it possible to save as much as if one were receiving higher wages in the city. We trust that our country practitioners will encourage as much as possible the importation of trained nurses among them.

News of the Week.

The Numerical Status of the Code Controversy.—Some misapprehension exists as to the exact state of affairs regarding the Code controversy, owing to the misleading statements of some of our out-of-town contemporaries. There are in the State of New York 10,000 physicians (in 1880, 9,272), of whom the homœopaths claim 1,000. Of the remaining 9,000, there have been 2,403 who have signed a paper upholding the National Code, "until it is changed by the American Medical Association." Many of these, as is well known, signed under the belief that the said association would soon make some change, and not from any antagonism to the principles represented in the State Code. It may be questioned, therefore, if a majority, or even a third of the reputable medical men in this State favor the views and position championed by Drs. Squibb and Flint, Jr., and by our out-of-town contemporary.

Medical Society of the County of New York.—The annual meeting of this Society will be held in the hall of the Young Men's Christian Association, corner of Fourth Avenue and Twenty-third Street, Monday evening, October 22, 1883.

Concerning a Charge Against the President of the Academy.—In a report of the last meeting of the New York Academy of Medicine, in the *Boston Medical and Surgical Journal* of October 11th, there appeared

what seems to be intended as a serious charge against the president of the Academy. Every man of honor would so regard it. The idea is distinctly conveyed, that two names had been used on the notices, one as mover and the other as seconder of the amendments, "without proper authorization," and that they "had declined to serve in this capacity." Both had agreed "to serve in this capacity," and neither declined until after the notice was printed.

We make no comments until sufficient time has elapsed for the writer to correct his statement.

THE INQUEST AS TO THE EPIDEMIC IN THE EAST CHESTER ASYLUM.—The Coroner's inquest in the case of Emma Nicholson, who died at the Mount Vernon Home of the New York Infant Asylum, has been concluded. The jury returned a verdict in substance as follows: "We find that Emma Nicholson died at the East Chester Branch of the New York Infant Asylum, October 5, 1883, from a complication of diseases, the immediate cause of her death being scarlet fever, diphtheria, and pleuro-broncho-pneumonia. Within the last two months fully thirty per cent. of the children in the asylum have died. This fearful rate of mortality, in our opinion, is the result of gross negligence upon the part of those having charge of the medical and sanitary departments, and the lack of attention of the president of the society, acting under the authority of the Board of Management, in appointing a person incompetent of performing the duty required of a physician in charge of such an institution. We respectfully request that immediate steps be taken for the suppression of the epidemic in the asylum. We further request the Coroner to ask the District Attorney of this county if this matter is not a proper subject for criminal investigation."

We think it probable that the above verdict may represent but one side of the case, as we are informed that a competent sanitarian and medical visitors are attached to the asylum.

A NEW MEDICAL JOURNAL.—The first number of the *Medical Student*, edited by William G. Mortimer, with its editorial office in the midst of medical teachings, and especially designed for students preparing for examination, is upon our table, and has a tidy appearance. The two noteworthy articles in this number are a sketch of the life of Prof. William A. Darling, with illustration, and an interesting letter from J. Milner Fothergill.

MEDICAL COLLEGES NOT RECOGNIZED.—At the last meeting of the Missouri State Board of Health, held at Springfield, the diplomas of three of Missouri's Medical Colleges were refused recognition. These colleges were the Joplin Medical College, the Kansas City Hospital College of Medicine, and the St. Joseph Northwestern Medical College.

STAMPING OUT SMALL-POX.—The Sanitary Association met on October 13th, in New Orleans, to confer with the commercial bodies and Cotton Exposition delegates as to the best plan for preventing the spread of the small-pox. A plan for the permanent extinction of small-pox was submitted, providing for the employment of fifteen physicians, at $100 per month, as sanitary inspectors; ten sanitary police at $50 per month, and the appropriation of $500 for the purchase of vaccine virus and disinfecting material. The city is to be thoroughly inspected from house to house, vaccination tendered, and premises disinfected. Those who decline vaccination are to be listed, with their residences and occupations, for public information. This plan was approved of by the representatives of the Cotton Exchange and Chamber of Commerce, and $5,000,000 (?) appropriated to carry it into effect.

AN OFFICE THIEF.—A colored boy, a mulatto, about eighteen years old, is going about the city asking to be employed as an office-boy. He is a sneak thief. He gives his name as Henry Harris.

AN AGED PHYSICIAN.—It is reported that Dr. Jackimovicz, of Jarvszinka, in the government of Kiew, Russia, has just died at the age of one hundred and six, and that he was able until nearly the close of his life to superintend the working of an extensive practice.

THE LAWN-TENNIS LEG.—The English journals have reported lately several cases of rupture of the plantaris muscle in lawn-tennis players. Dr. Philpot relates another instance in *The Lancet* of September 22, 1883. His patient stated that while serving a ball with the "cutting-down" stroke he felt as if some one had struck him sharply upon the calf of his leg, and immediately the limb became powerless. A few days subsequently large ecchymoses appeared, not only over the seat of the injury, but on the front of the leg as well, showing probably that the muscle itself was extensively lacerated. Perfect rest for a week till all local symptoms had subsided, and then a starch bandage and a high-heeled shoe, seemed all the interference required.

A PERIPATETIC TEMPERANCE LECTURE.—It is said that Weston, the pedestrian, has announced his intention of undertaking a tour through England and Wales, with a view to demonstrate the superiority of tea over beer and alcoholic drinks in general during periods of prolonged muscular exertion. He proposes to walk fifty miles a day for one hundred days, and at the close of each day's walk to deliver in the town to which his day's journey may have brought him, an address on temperance, having for its title, "Tea *versus* Beer." He is anxious for medical men of the towns through which he may pass, and in which he spends the night, to visit him, for the purpose of recording the state of his temperature, respiration, pulse, etc. It is proposed to commence his tour on November 5th, and should this date be finally adopted, the task, if successfully accomplished, will be completed on February 28th. As Sunday will be taken as a day of rest, the actual distance traversed each week will be three hundred miles.

UNIVERSITY OF VERMONT.—Mr. John P. Howard, of New York, has offered to rebuild the medical department of this old university at Burlington, giving it large dissecting-rooms, a large hall for its anatomical museum, and a lecture-room for three hundred hearers. The expense will be about $40,000. He offers to convert the present medical college building into a gymnasium for the university students. The same gentleman rebuilt the main university building last year, and ordered a colossal statue of General Lafayette, who relaid the cor-

ner-stone of the centre building in 1825, to be modelled by Mr. J. Q. A. Ward. This statue was unveiled with appropriate ceremonies at the Commencement of the university last summer. These magnificent gifts, with many others to the town, including an opera-house to the Home for Destitute Children, the latter largely given by himself several years ago, make a summary of $400,000.

EPIDEMIC OF DENGUE IN EGYPT.—*El Ensayo Médico* states that there was an epidemic of dengue in Egypt at the same time that the cholera was raging. Over thirty thousand persons in Cairo alone were suffering at one time from this painful affection.

THE EXISTENCE OF YELLOW FEVER in Pensacola and in Brewton, Ala., continues to be a matter of dispute among health officials.

FIGHTING TO KEEP THE CODE QUESTION IN THE NEW YORK ACADEMY OF MEDICINE.—A meeting of physicians who are opposed to any change in the present status of the Code question in the Academy of Medicine, was held at Mott Memorial Hall, October 15th. A call had been issued to the effect that it was thought to be of the greatest importance to the welfare of the Academy of Medicine that the proposed amendments to the constitutions and by-laws should be defeated. An invitation was extended "to meet some of the friends of the Academy who are opposed to the passage of these amendments and who desire to put an end to the discussion of codes of ethics in that body." The call was signed by Drs. Alonzo Clark, T. M. Markoe, Abram Du Bois, John T. Metcalfe, and H. D. Nicoll. Dr. Ellsworth Eliot presided, and there were about one hundred physicians present. There was an informal discussion of the proposed amendments of two hours' duration, in the course of which preliminaries were arranged for action on them at the regular meeting of the Academy on Thursday evening.

Reports of Societies.

MEDICAL SCHOOL OF HARVARD UNIVERSITY.

One Hundredth Anniversary, held in Boston, Mass., October 17, 1883.

(By Telegraph to THE MEDICAL RECORD.)

THE celebration of the one-hundredth anniversary of the establishment of the Medical School of Harvard University, and the dedication of its new building on the corner of Boylston and Exeter Streets, commenced this forenoon in Huntington Hall, at 11 o'clock. President Eliot, in opening the exercises, spoke of the three men who founded the School one hundred years ago, amid many trials and discouragements, and from whose modest beginning has grown up the present School with its staff of forty-seven teachers. The speaker alluded to the great advance recently made in medical science, its brilliant future, and the means for its advancement. He then welcomed the guests and benefactors of the School, and introduced "the oldest professor of our School and the youngest, the man of science and of letters, our teacher and our friend, Dr. Holmes." The feature of the occasion was the oration by Professor Oliver Wendell Holmes. He commenced by taking a retrospective glance at the period when the Harvard Medical School began its teachings, and which brought the professional condition of the earlier epoch to that of the present. He distinctly remembered the Boston practitioner who walked among the dead after the battle of Bunker Hill, and pointed out the body of Joseph Warren among the heaps of slain. Eight years had passed since John Jeffries was treading the bloody turf on yonder hillside. The independence of the United States had just been recognized by Great Britain. The lessons of the war were fresh in the minds of those who had served as military surgeons. Dr. John Warren, a younger brother of Dr. Joseph Warren, who fell at Bunker Hill, was the first to suggest the founding of a medical school in connection with Harvard College, and was the first Professor of Anatomy and Surgery. Those who remembered his teaching had spoken with admiration of the eloquence and enthusiasm with which he lectured. Dr. John Warren was a man of great energy, spirit, and ability. The lectures of the newly-founded school were delivered in Cambridge, until the erection of the building known as the Massachusetts Medical College, in Mason Street, in the year 1815. It was no easy matter for a busy Boston practitioner to deliver a course of lectures in the university town, but Dr. Warren did not ask whether it was easy or not. Benjamin Waterhouse, honorably known for having been the introducer of vaccination into America, was the first Professor of the Theory and Practice of Medicine. Dr. Holmes remembered him well by the scar of the vaccination. His powdered hair and *queue*, his gold-headed cane, his magisterial air and diction, were familiar to him from his boyhood. The first Professor of Chemistry was Aaron Dexter. It was the forming period of that science. Black, Cavendish, Priestley, Lavoisier, were building it up with their discoveries. A course of chemical lectures delivered in Boston or Cambridge at that day was probably, as it certainly was at a later day, very entertaining, and not wholly uninstructive. The apparatus of illustration was doubtless very imperfect in Dr. Dexter's time compared to what is seen in all the laboratories of to-day. We may admire his philosophy and equanimity, therefore, in recalling the story I used to hear about him: "This experiment, gentlemen," he is represented as saying, "is one of remarkable brilliancy. As I touch the powder you see before me with a drop of this fluid, it bursts into a sudden and brilliant flame." Which it most emphatically does NOT do as he makes the contact. "Gentlemen," he says, with a serene smile, "the experiment has failed. But the principle, gentlemen, the principle remains firm as the everlasting hills."

The speaker next referred to the times when he was a student of medicine, and then drew vivid pen-pictures of the medical worthies he had met here and abroad: John Collins Warren, James Jackson, Jacob Bigelow, Walter Channing, Boyer, Dupuytren, Lisfranc, Velpeau, Civiale, Cruveilhier. Two or three waterlogged old professors were moored to their chairs, one of them not so very old, but with a good many ancient barnacles about him, one formidable three-decker, Broussais, with his upper tier of guns still above the water line and banging away at the assailants of his famous "physiological doctrine." What had been the most signal advance in the science and art of medicine between 1783 and 1833? The first half of the century we are considering. In medical science the method of studying the human body by its constituent elements. The general anatomy of Bichat—which is to common descriptive anatomy what geology is to geography, would still hold the first place if it could claim all that the microscope has done for it. It was, at any rate, a great onward movement with far-reaching results for physiology and pathology. Next to this would come the discoveries of Sir Charles Bell and Magendie of the distinct motor and sensitive functions of certain nerves and nerve-roots. The most important practical achievement was the introduction of vaccination. He knew that it had been, and is even at the present day the subject of violent attacks and bitter prejudices. There was always an unconvinced and irreclaimable minority. Those who

believed not Moses and the prophets would not believe though one rose from the dead to convince them.

Laennec's invention of auscultation held the next place to vaccination in the records of practical improvement during our first half century. The recognition of the affection of the kidneys known as "Bright's disease," and the separation of the too familiar and fatal malady, diphtheria, from those with which it was long confounded, are other notable advances made during the period in question. Comparing the two half centuries the following improvements might be balanced against others: Against the discovery of the double nerve-function, the extended knowledge of the reflex function; against "general anatomy," the cell doctrine due to the discoveries by the use of the achromatic microscope to which we also owe the discovery of the minute organisms, so important in the history of disease; against vaccination we may offset surgical anæsthesia; against the stethoscope, the medical thermometer. We must divide the honors of lithotrity and those of ovariotomy between the two periods. The beneficent changes in the treatment of insanity effected by the earlier labors of Pinel and Esquirol have been admirably carried on in the more recent period. But the last fifty years had not been less productive. Modern chemistry was no longer a mystery of pyrotechnical display; physiology was a new science; anatomy involved the more exact study of regions; operative surgery had achieved the triumph of ovariotomy, resection of joints, paracentesis. In the prevention of disease the gain had been most extraordinary as evinced by the study of the germ theory. The phrase of "drain fever" had saved hundreds of lives.

The practice of drugging for its own sake, the fatal bequest of the English apothecary or "general practitioner," whose profit was made on his medicines, he pointed out to the medical profession of this country, as he believed, when, some twenty and more years ago, in guarded terms, often misquoted, he denounced it somewhat too epigrammatically for some of his friends of the Massachusetts Medical Society. Professor Gairdner, of the University of Glasgow, had recently used language much plainer than his innocent allusion to the probable effect of sinking a car of miscellaneous drugs among the fish. Bleeding was an almost unknown operation. Of the four great remedies of Dr. Holyoke's and Dr. James Jackson's time, antimony had fallen from grace, and calomel, instead of being next the apothecary's right hand, as the letter "e" is to the printer's, has gone to an upper shelf, where it may be supposed to repent of its misdeeds like Simeon Stylites. Cotton Mather had said, a century and a half ago: "I am not sorry that antimonial emetics begin to be disused." He had said, too, more rhetorically, "Mercury, we know thee; but we are afraid thou wilt kill us, too, if we employ thee to kill them that kill us." This was a lively way of putting a thought long afterward made into a famous saying. While old drugs and old methods have become obsolete, new drugs and new methods have come in to take their place. The less the patient is annoyed with over medication, painful and disgusting remedies, the more tractable he is likely to be, and the less likely to throw his medicine out of the window, where it will kill the chickens instead of the fishes, the more attention is likely to be paid to air and cleanliness and comfort, and the more to the kind of nourishment and the modes and times of giving it. In proportion as the worth of the apothecary diminishes, the cares of the nurse are called upon to render disease endurable by all the arts known to a skilful attendant. Little things mean a great deal in the sick-room. "Will you have an orange or a fig?" said Dr. James Jackson to a fine little boy now grown up to goodly stature, and whom he might be fortunate enough to recognize among his audience of to-day. "A fig," answered Master Theodore with alacrity. "No fever, there," says the good doctor, "or he would certainly have said an orange." Now it is just in these little unimportant all-important matters that a good nurse is of incalculable aid to the physician, and the growing conviction of the importance of the thorough training of young women as nurses is one of the most hopeful signs of medical advancement. So much has been done and is doing that the days of the Sairey Gamps and Betsy Prigs are numbered. I have often wished that disease could be hunted by its professional antagonists in couples—a doctor and a doctor's quick-witted wife making a joint visit and attacking the patient—I mean the patient's malady, of course—with their united capacities; for I am quite sure that there is a natural clairvoyance in a woman which would make her as much the superior of man in some particulars of diagnosis as she certainly is in distinguishing shades of color. Many a suicide would have been prevented if the doctor's wife had visited the victim the day before it happened. She would have seen in the merchant's face his impending bankruptcy while her stupid husband was prescribing for his dyspepsia and indorsing his note. She would recognize the lovelorn maiden by an ill-adjusted ribbon, a line in the features, a drop in the attitude, a tone in the voice, which mean nothing to him; and so the brook must be dragged tomorrow. The dual arrangement of which he had spoken was, he supposed, impracticable; but a woman's advice, he suspected, often determined her husband's prescription. Instead of a curtain-lecture on his own failings, he gets a clinical lecture. On the puzzling case, it may be, of a neighbor suffering from the complaint known to village nosology as "a complication of diseases," which her keen eyes see into as much better than his as they would through the eye of a small-sized needle, she will find the right end of a case to get hold of, and take the snarls out as she would out of a skein of thread or a ball of worsted, which he would speedily have reduced to a hopeless tangle.

The speaker in enumerating the advances made, gracefully and feelingly alluded to the brilliant achievements of Bigelow in crushing stone by a new method and in reducing dislocations by simple and effective manipulations. The speaker then glanced at the present methods of study, and compared with the past the high standard of medical education exacted by the Harvard Medical School and the facilities to that end, as given in the princely accommodations in the new medical building.

The audience was large, and the address, delivered in Holmes' inimitably happy style, was frequently interrupted with uproarious applause.

Dr. Francis Minot, on behalf of the donors, presented to the school a portrait of Dr. Holmes, painted by J. W. Alexander, to be placed in the college in remembrance of his invaluable services to Harvard University, to the medical profession, and to the community.

Ex-Mayor Samuel A. Green then presented to the school, on behalf of the donors, a bust of Dr. Henry J. Bigelow, executed by Launt Thompson, of New York. Dr. Green spoke of Dr. Bigelow's great contributions to the science of surgery, especially dwelling upon his researches on the hip joint and its dislocations, his wonderful operation of rapid lithotrity, and his advocacy and advancement of the use of ether as an anæsthetic at the Massachusetts General Hospital after its discovery by Morton.

After this the audience proceeded to the new school-building, where prayer was offered by Rev. Dr. Peabody, and the building dedicated to the purposes of medical instruction.

Addresses were made by President Eliot in behalf of the Corporation; Henry Lee, Esq., in behalf of the donors, and Professor Henry W. Williams, in behalf of the medical faculty.

The building was then declared open to the inspection of the guests and was viewed with great satisfaction. Among the visitors were Sir William McCormac and Sir Lyon Playfair, Mr. Clinton T. Dent, of London; President D. C. Gilman, Johns Hopkins Hospital, Baltimore;

President Laws, University of Missouri, and President E. G. Robinson, Brown University, Colorado; Robert Murray, United State Army; Professors Osler, Campbell, and Howard, Montreal; Drs. Mullen, of Hamilton; Atkens, of Toronto, and Professor T. Sterry Hunt, of Montreal; Professor Carmalt, of Yale College; Drs. J. Marion Sims, Fordyce Barker, C. R. Agnew, J. C. Dalton, W. H. Draper, T. E. Satterthwaite, C. C. Lee, G. F. Shrady, of New York; Drs. Mears, Minis Hays, H. C. Wood, Tyson, and Woodbury, of Philadelphia; Drs. Wood, Gerrish, and Dana, of Portland; Twitchell, of Keene, N. H.; Gale, of Brattleboro, Vt.; Drs. Caswill, Ely, Miller, and Parsons, of Providence, and many others representing different parts of the country. In the evening a reception was tendered at Young's Hotel where a bountiful collation was served.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 18, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

ACTION ON THE PROPOSED AMENDMENTS TO THE CONSTITUTION AND BY-LAWS.

AFTER the reading of the minutes of the last stated meeting and the report of the librarian, the Academy went into Committee of the Whole, with Dr. Ellsworth Eliot in the chair.

DR. AUSTIN FLINT, JR., said he did not desire to discuss the proposed amendments, but wished to say a few words in explanation. He did not pretend to represent any one or anybody, but simply was the spokesman of a certain number of gentlemen who are deeply interested in the Academy, and who believe that it can be best preserved in its usefulness by maintaining its present Code of Ethics, and who are uncompromisingly opposed to these amendments, one and all. The one object of the amendments is to eliminate from the By-laws and Constitution of this Academy everything relating to medical ethics, and to reduce it to a purely scientific body. Dr. Flint further spoke of the effect which would be produced upon the Council by the adoption of the proposed amendments, and at the close of his remarks moved that the committee rise.

After some discussion as to whether or not the motion to rise was debatable, and in which the decision of the Chairman was sustained that it was not, the committee rose.

After further discussion as to whether the Committee of the Whole had yet reported, and in which the decision of the President was sustained, the Secretary of the Committee of the Whole at the stated meeting held October 4th, Dr. W. M. Carpenter, was requested to report, who then read the resolution offered by the President and adopted by that committee.

The resolution was that the Committee of the Whole regarded it as advisable to adopt the proposed amendments to the Constitution and By-laws.

DR. A. FLINT, JR., moved that the report be laid upon the table.

On this motion the ayes and nays were called.

After some discussion as to which should be used in calling the names of the voters, the register of the evening or the roll of the Academy, it was decided by a vote of 88 ayes to 84 nays that the register should be used. The vote on the motion to lay upon the table was then defeated by a vote of 115 nays to 96 ayes.

DR. A. L. LOOMIS then moved that when the vote on the amendments is taken it be by ballot. Carried.

Dr. Loomis then moved that the Academy proceed to ballot on the proposed amendments and by-laws.

DR. A. FLINT, SR., moved as an amendment that the proposed amendments to the Constitution and By-laws be indefinitely postponed.

The ayes and nays were then called for and the result was: Ayes, 94; nays, 117.

DR. LOOMIS then renewed his motion that the Academy proceed to ballot on the proposed amendments. Carried.

THE PRESIDENT appointed as tellers Drs. H. D. Nicol and Daniel Lewis, with the Assistant Secretary, Dr. A. M. Jacobus.

The result of the ballot was 121 votes for and 92 against. The amendments were declared lost, as they required a three-fourths vote to adopt them.

THE PRESIDENT then said: I beg the indulgence of the Academy for a few moments only. Duty and honor demand that every member of an organization like this Academy of Medicine, with its high scientific aims and its joint stock property necessary to make those aims attainable, should cheerfully bow to the will of the majority. No one can doubt that it was with pain and regret that I announced the vote of failure to adopt the amendments which I regarded as most important for the future of the Academy. Having given my reasons for this belief in a letter addressed to every Fellow, and having at the last meeting still further explained my views, and having failed to convince a sufficient number to secure their adoption, I bow with submission to the decision. No one can assert that I have sought to secure my end by personal influence or personal solicitation. I have felt that this matter should be left to the intelligence and judgment of such a class of men as constitute this Academy, unbiased by passion or partisan feeling. I am well aware that it demands a higher tone of principle, and a more noble magnanimity, to cheerfully acquiesce in the will of a minority, but I now earnestly beg of all to forget, so far as this Academy is concerned, all past controversies, many of which, I am convinced, are not so much differences as to principles, as differences in regard to details—and that all should unite in earnest work for this Academy in its high endeavors to advance medical science, to support and increase this important library, for which so much has been done in the past by most liberal benefactors, and to keep up the journal and circulating department. For my own part, I can only promise for the future what I have sought to give in the past, my best efforts in this direction, not only while I have the honor to hold my present position, but ever after. [Great applause.]

DR. A. L. LOOMIS read the preamble and resolutions passed at the stated meeting of the Academy last spring, by which the Committee on Admissions was instructed not to report for active fellowship the name of any candidate who could not sign the By-laws of the Academy containing the Code of Ethics of the American Medical Association, and then moved that they be *rescinded*. He urgently appealed to the Academy to support his motion in the interests of harmony.

DR. E. C. HARWOOD rose to a question of privilege and submitted in writing an explanation of his vote on the resolutions at the time of their adoption.

DR. A. FLINT, JR., raised the point that the motion was out of order, because when the resolutions were adopted their reconsideration was postponed indefinitely.

THE PRESIDENT ruled that the motion was in order, on the ground that rescinding and reconsidering are entirely different.

DR. FLINT appealed from the decision of the chair.

The chair was sustained.

DRS. ROOSA and AGNEW supported the motion.

DR. LEON opposed it, and moved to adjourn, but his motion was lost.

DR. PIFFARD moved the previous question. Carried.

The motion to rescind and abolish the preamble and resolutions adopted at the meeting in April, 1883, was carried. [Great applause.]

The Academy then adjourned.

Reviews and Notices.

ANLEITUNG ZUR TECHNIK DER ANTISEPTISCHEN WUNDBEHANDLUNG UND DES DAUERVERBANDES. Von DR. MED. G. NEUBER, Privatdocent an der Univesität Kiel. Kiel: Verlag von Lipsius und Tischer. 1883.
A GUIDE TO THE TECHNIQUE OF THE ANTISEPTIC TREATMENT OF WOUNDS AND THE PERMANENT DRESSING. By DR. G. NEUBER, Privatdocent in the University of Kiel.

SINCE the adoption of the antiseptic method in Professor Esmarch's clinic at Kiel, several modifications have been introduced and carried out with marked success by Dr. Neuber. The most remarkable of these is the method of permanent dressings ("Dauerverband"), by which a large proportion of operation-wounds have been completely healed under one bandage or dressing. Details of this method and its results have been from time to time communicated through papers by Dr. Neuber in the *Archiv für Klin. Chirurgie*, which have been frequently quoted. The present volume of about one hundred pages, with numerous illustrations, is intended to be a complete guide to the practice of the Kiel clinic, together with a statistical record of its results. But it is more than this. It is a thoroughly good treatise on the subject of wound-treatment, and as such, and quite independently of its relation to the author's own methods, we recommend it warmly to the reader, and hope that a translation may place American surgeons in a position to show such creditable statistics as are exhibited in its pages.

INSANITY: ITS CLASSIFICATION, DIAGNOSIS, AND TREATMENT. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M.D., Professor of Medical Jurisprudence and of the Anatomy and Physiology of the Nervous System at the New York Post-Graduate School of Medicine; President of the New York Neurological Society; formerly Physician to the Department of Nervous Diseases of the Metropolitan Throat Hospital, and of the North-Eastern Dispensary. 8vo, pp. 415. New York: Bermingham & Co. 1883.

A PERUSAL of this work can hardly fail to leave the impression that there are at least two factors in its etiology. To speak in a psychiatrical, we will not say Pickwickian, sense, these might be designated as the psychical and somatic. The psychical factor may be perceived in the natural desire of the author, as explained in the preface, to embody his individual views on certain phases of his subject, which have previously appeared in isolated communications to the medical press, in "the first systematic treatise on insanity published on this side of the Atlantic since the days of the immortal Rush" (and which, by the way, is dedicated on the previous page as an "humble tribute").

The somatic factor—to force the metaphor a little—crops out in the excess of spleen manifested in the author's numerous and uncalled-for uncomplimentary allusions to the attainments and qualifications of certain alienists, whose expert testimony in a recent *cause célèbre*, with which the profession are too familiar, happened to conflict with his criterion. It is with considerable hesitation that we make any reference to a subject, which is at best an unpleasant one, but Dr. Spitzka's policy in this particular is far too pointedly expressed to admit of any other inference than that this publication is intended, not merely as a vindication of his own position, but also to accomplish the alienistic annihilation of those gentlemen whose views on insanity in general, and on Guiteau in particular, have been the reverse of his own. It would have been more considerate, not to say logical, in Dr. Spitzka, after having observed "the failure" of his brother experts "to properly co-ordinate" upon the witness stand "their impressions" of the murderer of Garfield "as the basis of logical conclusions and actions," to simply prove to them that they were the unfortunate subjects of "the so-called chronic delusional insanity" with marked symptoms of "moral perversion," instead of emulating "the Fourteenth Street assassin" by running a muck among them armed with a venomous pen. He should not only have remembered that "no delusion was ever cured by ridicule," but should have also taken into account the fact that, in the absence of any "scientific treatise on insanity on this side of the Atlantic," the "special points" on which he based his diagnosis might yet have been "comparatively new" and strange to them. We believe some such classification as we have suggested would have possessed quite as much intrinsic weight with intelligent "students and practitioners," as his own amiable division of the alienists who failed to agree with him on one particular case into "a combination of medical politicians, gynecologists, and laymen" (p. 357). Dr. Spitzka, however, having proved to his own satisfaction that the testimony of these individuals was "in harmony with the age, circumstances, and surroundings" of such a "combination," and thus depriving them of even the pitiable plea of insanity, proceeds to "knock them out" with a display of vigor and vivacity more suggestive of a follower of Mr. John L. Sullivan than "the immortal Rush." Vituperation is poor logic, and it certainly is unfortunate that the "first systematic treatise, etc., etc.," should savor so strongly of the campaign document. Extreme assertions, especially those of a personal character, are always to be taken *cum grano salis*. So, when such assertions are coupled in a scientific treatise with the expression of views which, in the present state of American psychiatry, the author admits to be extreme, he should not complain should the profession show a tendency to treat them with the same seasoning.

It has been far from a pleasant or congenial task to criticise in this manner Dr. Spitzka's otherwise scholarly work. That he has allowed personal animus to enter into a scientific discussion is the glaring defect of the book. It is forced upon the reader in a way which calls for comment. We think the profession at large will agree with us that such comment should be emphatic and condemnatory. That our remarks have been neither "finical or hypercritical," we submit the single fact, which the reader will scarcely be able to convince himself is a coincidence, viz., that, whereas every expert on the Guiteau trial, with but one exception, is industriously called upon in these pages to figure in a *rôle* analogous to that of the "terrible example" in a temperance lecture, the single witness whose testimony supported Dr. Spitzka receives the most effusive and flattering recognition. A glance at the index shows that reference to this authority is made no less than ten times, while Esquirol, Krafft-Ebing, Meynert, Maudsley, Bucknill, Tuke, and other minor lights, are either dismissed with the most casual mention or "damned by faint praise." The inference is obvious.

The strictly scientific part of Dr. Spitzka's book is deserving of considerable praise. The accomplished author displays throughout a masterly grasp of his intricate subject and a familiarity with its bibliography which is in the highest degree commendable. The volume has been issued in fairly neat form, though the few woodcuts, with one or two exceptions, are poor. The chief fault discernible in the author's style is the rather common one of an undue preference for forced derivatives, which is plainly to be attributed to an attempt to secure thoroughness and exactness of expression, but which often has the effect of causing his elaborate sentences to appear involved and unnatural, necessitating somewhat the same strain upon the attention which one experiences in reading a too literal translation of one of the ancient classics. It is, however, interesting to learn that "verbigeration" in cultivated paretic dements "in less edu-

cated ones" is replaced by a "*word diarrhœa!*" (p. 210). The oversight which makes "Prosencephalon" a Latin word (p. 101) would be trivial did it not occur in a discussion on derivation. Aside from the author's tendency to sacrifice simplicity to detail, the presentation of his arguments is direct and decided, his illustrations usually apt and well put, and his exposition of the most important points forcible, though occasionally dogmatic.

Dr. Spitzka's elaborate definition of insanity is avowedly altered to meet the exigencies of medical jurisprudence, although we question whether an American jury which is not chosen from the members of the Concord School of Philosophy would derive a much clearer idea of insanity from it than from Shepard's playful *dictum* about the "neurine batteries of the brain." We might also venture to question the soundness of the syllogism that, whereas "mental pathology has made more rapid progress in Germany, Italy, and France, where little stress is laid on such definitions, than in England or America," and whereas "an English author on lunacy" has offered a definition with the object of "puzzling the lawyers," that *therefore* in Anglo-Saxon countries the "chief need for the definition is a medico-legal one."

Dr. Spitzka's definition is neither much worse nor much better than many others with which the profession is familiar. While it may certainly be true that "the inability to correctly register experiences and impressions in sufficient number to serve as guide for rational conduct is an essential feature of idiocy or imbecility; and while it may also be true that "the failure to co-ordinate impressions as the basis of logical conclusions is the characteristic feature of insanities manifested by delusive opinions, insane projects, and imperative conceptions" —and while the words "in harmony with the individual's age, circumstances, and surroundings" are added as qualifications, with propriety, nevertheless, until we have some mathematical standard by which to prove that any given impression is registered correctly, that any given conclusion is logical, and that any given action is "in harmony with the individual's environment, such a definition will be worthless in a court of law. Any lawyer could make it exclude the insane, and include the sane, at will. He certainly has not improved upon Dr. Bucknill's classical definition of insanity as "a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts, have separately or conjointly been produced by disease," which is shorter and clearer than his own, and fully as accurate.

In our opinion, Dr. Spitzka underrates the importance of the psychological treatment of his subject throughout. Such a treatment is assuredly more truly scientific, and can be made as completely practical as one more distinctively clinical or pathological. It may be that the enthusiasm with which he has developed the somatic elements of insanity has blinded him in a measure to its psychical bearings. The chapters on "The Physical Indications of Acquired Insanity," "Somatic Signs of Insanity Indicating the Existence of a Constitutional Taint of, or a Predisposition to Insanity," and "The Morbid Anatomy of Insanity," are by far the most readable and suggestive, as well as the best sustained in the book. But this very fact makes the work an uneven one. Aside from these, his discussion of monomania and paretic dementia will probably prove most interesting to the student of psychiatry. He has evidently taken a great deal of pains to give a perfect "classification of insanity." In this he has shown more than his usual skill and adroitness, and the classification is certainly a sound one from his point of view.

ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF LOUISIANA TO THE GENERAL ASSEMBLY, FOR THE YEAR 1882. Baton Rouge: Leon Jastremski, State Printer. 1883.

THIS voluminous report, consisting of over six hundred pages of printed matter, besides several intercalated statistical tables, embraces a period of eighteen months, from January 1, 1882, to July 1, 1883. The volume contains a detailed report of the quarantine and sanitary operations of the board during this time, an account of the commercial growth of the State under the successive dominations of France, Spain, and the United States; peculiarities in the political and medical history of Louisiana, the etiology of phthisis, the climate of Rio Janeiro, a letter to his Excellency the President of the United States, treatises on yellow fever and malarial fevers, illustrated with eleven highly colored lithographic plates, and a varied assortment of other interesting material. The Louisiana State Board of Health has done some hard work, and some very necessary and valuable work, but if it is no more economical in other matters than it is in the use of paper and printer's ink, we fear it must be a very expensive institution.

PRACTICAL LESSONS IN ELEMENTARY PHYSIOLOGY AND PHYSIOLOGICAL ANATOMY for Schools and Science Classes. By D. M'ALPINE, F.C.S. Twelve Plates. London: Bailliere, Tindall & Cox. 1883.

THE book before us is of the size of an atlas, and contains a folded leaf with colored lithographs showing the vertical section of a frozen child, also separate lithographs of the different viscera. Besides this, there are two full-page lithographs showing sections of the rabbit, and numerous other plates showing different tissues and organs.

The author's object is to present a work which will be practical, realistic, and attractive to science students. In selecting the rabbit as the animal whose anatomy is to be studied, the author has made a wise device, for i is much more easily handled than the cat or dog.

WHAT TO DO FIRST IN ACCIDENTS AND EMERGENCIES. By CHARLES W. DULLES, M.D. Second edition, revised and enlarged. With new illustrations. Philadelphia: P. Blakiston Son & Co. 1883.

THIS little manual is intended more especially for use in the absence of the physician. The immediate treatment both of surgical and other injuries and accidents is presented in a plain and very acceptable manner, and will undoubtedly prove a useful guide in many emergencies. Among the various cases dealt with are: Drowning, fits, effects of heat and of cold, sprains, fractures, wounds, hemorrhages, etc., etc., together with various domestic emergencies.

POISONING BY SALICYLATE OF SODA.—Dr. Pineau writes in *L'Union Médicale*, of July 5, 1883, of a young man, suffering from typho-malarial fever, who took by mistake two and a half drachms of salicylate of soda. Nothing unusual was noticed for over two hours, when the patient was suddenly seized with extreme weakness, amblyopia, and tinnitus aurium. The entire surface of the body became blue and the extremities were cold. Finally such a profuse perspiration broke out that the mattress was soaked, and the patient was enveloped in steam as if in a vapor-bath. This condition lasted for about three hours. When seen several hours later, the patient was pale and still covered with a cool sweat. He had not urinated for about twenty-four hours, but passed at this time nearly a pint of strongly acid urine, not albuminous, and containing 26.4 grammes of urea per litre. The patient recovered without special treatment. The fever from which he was suffering subsided and convalescence became at once established. The reporter does not state the mental condition of the patient, except to say that he did not at any time lose consciousness entirely.

LACTIC ACID IN DIPHTHERIA.—Dr. J. P. Lytle reports favorable results with a spray of lactic acid in diphtheria. He says that it rarely fails to dissolve the membrane in two or three applications. The solution used was of the strength of lactic acid, gtt. xxx.; aquæ, ʒ i.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

To the Editor of The Medical Record.

Dear Sir: Having participated in the opening excursion of the Northern Pacific Railroad, your correspondent had rather exceptional opportunities to observe many of the distinctive features of the far West, together with its peculiarities of life and manners. It may interest some of your readers to be made acquainted with the impressions, more particularly from a medical point of view, which the wide West makes on what is commonly there called an "Eastern tenderfoot." Now, "tenderfoot" is not to be construed as the Western equivalent of that much evolved and more abused specimen of mankind, familiarly styled "dude." For even the Montana cowboy recognizes the latter. Not that he has ever seen the true prototype of a class that was erstwhile so numerous among us. But he is convinced that a person caught in the act of wearing a white linen collar, and who looks as though he might have recently shaved or washed his face, must be a dude, true and proper. And, moreover, since the typical Westerner freely, and often quite forcibly, expresses his convictions, the term "dude" is at present perhaps oftener employed west of the Mississippi than east of it. Please pardon this explanatory digression, but it really seemed essential to point out that the tenderfoot need not necessarily be a dude, and *vice versa*.

Your correspondent spent one week in Chicago, and endeavored to ascertain the status of the medical profession there. Considering the amount of talent in its ranks, it stands much lower than it should. The principal blame for this unfortunate circumstance must attach to the physicians themselves. The Chicago doctors are under-paid, and, therefore, under-estimated.

The phenomenal growth and commercial prosperity of this great Western metropolis excite the wonder and admiration of all visitors, native as well as foreign. This unparalleled rise is without the slightest exaggeration one of the wonders of the world. But the Chicago doctors lag behind, pecuniarily and in popular esteem. And why? Simply because as a class they charge too little for their services. The Chicago of to-day is no longer a merely rising city, whose inhabitants fondly dream of future glory. It is a great living actuality, with an assured future of still greater accomplishment. Why, then, have the Chicago doctors retained the "small-city fee?" In commercial capitals the principle of valuation is the predominant one. Price determines worthlessness as well as worth. Whatever is excellent commands a high figure. Hence the people argue that cheap doctors must be poor doctors. It would be difficult to convince the average citizen of the fallaciousness of such reasoning. The remedy for this evil is self-evident. Let the doctors charge more. The old established physicians must lead this reform movement. They will lose patients at first, but they will gain in prestige, and their incomes will not suffer. In the end they will have elevated the profession as a whole, while they will have benefited themselves as individuals.

This is not idle talk. It is the earnest advice of one who would fain see his chosen profession lifted above, or at least to the same level with other callings. For such eminence is but the just reward for a life of ceaseless toil and self-sacrifice, and for the unhesitating assumption of graver responsibilities than any other profession entails. And in this connection the writer would be pardoned for humbly suggesting to the profession at large the advisability of inculcating "high-fee" principles, as essential to the proper standing of the doctor in the community. Sordid motives should ever be foreign to our profession. But let us recognize the actual commercial value of our services, without sham hesitancy, without the assumption of false modesty, without maudlin sentimentality. For as yet ours is a young country, where commercial values rule the day. In the ideal world that is to replace the present imperfect one, the doctor may well make fifty cent visits, and take the balance out in sentiment; but at present sentiment will not pass current in buying bread. And God knows the doctor needs bread, as much, if not more so than other mortals. And now let there be no further digression, but a broaching of more novel themes.

Concerning the evils of hospital management, and the intrigues of rival medical schools, it is quite unnecessary to write. Pretty much the same flavor attaches to these matters in Chicago as in New York. The less one dwells on such sore spots of the body medical the better. A few words about a new and highly deserving charity that has been quite recently inaugurated in Chicago. It is called the Lakeside Sanitarium. It has for its object the treatment of infantile diarrhœal diseases occurring during the warm weather. A commodious pavilion has been erected fronting the lake. Here the poor mothers take their suffering babies, the latter remaining all day. Hammocks, a kitchen, bathing facilities, the necessary drugs and restoratives have been provided, and a medical staff makes several daily visits. Dr. Randolph, formerly of the St. Francis Hospital, of New York, is one of the physicians in charge. He kindly explained the system to your correspondent, and pointed out the gratifying success that had already attended the life-saving efforts of this young institution. The immediately rallying effects of the pure lake breezes are a matter of constant surprise to all who witness their action upon the babes removed from crowded tenements. A rather serious drawback, however, would appear to be the present impossibility of allowing the little ones to remain in the sanitarium over night. But of course, with the growth of the institution, this defect will be remedied.

In taking leave of this city, it may not be amiss to repeat a story, that seems to your correspondent quite typical of Chicago and its rapid growth. A patriotic citizen having returned from a prolonged journey abroad, meets an old friend in the street, when the following brief colloquy ensues: "Well, old boy, I'm glad to see you back, do you think we've changed any while you were away?" "Changed," replies the former, "why don't you know we have lied about Chicago, and lied about her, and continued to lie about her. And yet to-day she is away ahead of all our lies!" Mayor Carter Harrison probably knows of this story.

About Minnesota it would be easy to say, with perfect justice, many pleasant things. In the first place, the Eastern traveller cannot fail to be agreeably affected by the exhilarating effects of its dry, crisp air. There is something so very unmalarious about it that one feels inclined to doubt whether the Minnesota doctor ever prescribes quinine. Almost the entire State is elevated from one thousand to two thousand feet above sea-level. Hence, its climate shows those peculiarities that are more or less characteristic of the entire Northwestern region—that is to say, there is an almost daily change from hot to cold, with a thermometrical range above 50° in spring and winter, and a variation of about 40° for the summer. Nevertheless, neither the almost tropical heat, nor the extreme cold ever become so oppressive and unbearable as we are accustomed to find them in New York.

Chronic pulmonary diseases appear to be rare in Minnesota; and indeed its salubrious climate would lend itself readily to the establishment of sanitary resorts for those afflicted with such maladies.

One circumstance strikes the traveller as quite peculiar in Minnesota, and that is the conspicuous absence of very old persons. Indeed, to a greater or less extent this applies to the entire region traversed by your correspondent. Leading physicians resident in the various towns and villages along the road are ready to admit this,

as a feature of the new life in their rapidly growing country.

The explanation they offer is based not on one, but on several facts, all operative in the same direction, viz., that of curtailing man's natural term of existence. Most potent among these various factors is the high tension of all human activity out there. Working with half-power is a thing unknown. All faculties are enlisted, all energies constantly strained to accomplish the chosen task of life. What wonder, then, that nature's stock of reserve force is early exhausted; and a sudden, complete collapse, as of the one-hoss shay, is the rule, not the exception. Death seems merciful, and does not linger in the lap of long and painful illness, as is so frequently the case with us. It takes the system by surprise, as it were; there is a short, sharp struggle, with a quick decision either one way or the other. Slight ailments would appear to be both less frequent and less attended to than in the East. Chronic affections are likewise fewer, in proportion, than elsewhere. Of course, all this is to be taken in a broad, general way, and not as a rule without exceptions.

One derives the impression, from the above, that the people there have no time to dally with disease. They are constantly in a hurry, even when sick. Evidently, they have not yet reached that point of civilization which allows them to "make haste slowly."

Respectfully yours,

EDMUND C. WENDT.

136 WEST THIRTY-FOURTH STREET,
New York, October 10, 1883.

(To be continued.)

THE THERAPEUTIC VALUE OF THE COLORADO CLIMATE.

TO THE EDITOR OF THE MEDICAL RECORD.

I HAVE been a reader of THE RECORD for four years, and do not remember ever to have seen a line in that journal in reference to Manitou or the State of Colorado as a health resort. I have observed also that among the numerous invalids who come to this section from nearly all parts of the world, it is rare to see one who hails from New York. The writer practised medicine in Brooklyn for three years, and I do not remember any mention of this place by the physicians of that city during that time. It has occurred to me, therefore, to endeavor to call the attention of New York physicians to the merits of Colorado as a resort for those afflicted with lung diseases. For this purpose I prefer to speak of my own experience and immediate surroundings, rather than make use of the various statistics collected by others.

The population of Colorado is largely made up of persons who came here originally on account of some lung disease, and have either recovered or found relief.

From the careful observation of such cases as have come under my care or notice, I think the following statements may be formulated as true: Spasmodic asthma is invariably and immediately relieved by a residence in Colorado. Asthma, accompanied by emphysema, bronchitis, or consumption, is relieved only in proportion as the catarrhal state of the air-passages is improved. Hay fever is not relieved. Nasal catarrh is usually much worse for a few weeks, when decided amelioration or a cure follows. The effect of this climate upon consumption is peculiar. The barometer stands at 22 or 23 inches; consequently the rarity of the atmosphere is great, and acts practically like a cupping-glass upon the blood-vessels. The altitude of Manitou is one and a quarter mile above the sea, and, as would be expected, an extraordinary expansion of the lungs is required to supply oxygen to the blood. Much of the reserve space of the lungs is called into use; diseased tissues are forcibly torn open; a passive catarrh of the lungs is converted into an active inflammation; slight or profuse pulmonary hemorrhages often occur; and what was before a slight cough, with moderate expectoration, becomes frequently a violent, almost incessant, cough, with profuse expectoration. With this there is usually more or less elevation of temperature. In a period of time varying from one month to one year, the fever disappears, the cough diminishes, and the expectoration becomes more scanty, and from this time on, in favorable cases, the patient progresses toward a complete recovery. As far as I am able to judge, no cavities result from this violent disturbance of the lung tissues.

I have sketched briefly a typical case, as observed in many instances. As would be inferred, this would represent a patient in the earlier stage of catarrhal pneumonia, in whose lungs no serious damage had occurred before coming here, and whose vital forces were still good.

Where the lungs are very seriously affected, and the vital forces are much impaired, the process of healing which I have outlined, viz., the conversion of a passive, lingering catarrh into an active inflammation, is not well borne, and is apt to end fatally much sooner than in a mild southern climate.

As far as my observation has gone, every case of consumption accompanied by early hemorrhages has been cured in this climate, if the patient has come here within a few months of the invasion of the disease. The time required for the symptoms to cease is from three months to two years. In other cases, unaccompanied by hemorrhage, resorting here shortly after the invasion of the disease, the majority have been entirely relieved of all symptoms. A certain proportion have succumbed to wasting hectic fever; others have fallen into a chronic condition, where progress in neither directiom seems to have been made for ten and even twenty years.

The climate of Colorado is extremely dry. It never rains from the middle of September until the middle of April—seven months. Three years ago there was no rain for eleven months. In the summer showers occur nearly every day at about three o'clock in the afternoon. Snow-falls come in the winter months. They seldom exceed two inches in depth, and lie upon the ground not longer than twenty-four hours. In 1881 there were two such flights of snow in Manitou; in 1882, three. During the winter the days are warm. An overcoat is not required. At night it is always cold, both in summer and winter.

Manitou is located at the foot of Pike's Peak. The scenery is such as to attract twenty thousand visitors annually. There are here nine mineral springs. Three are chalybeate; the remainder closely resemble the Apollinaris in taste and properties. There are here frequent mails and telegraphic facilities, railroads, banks, churches, and much that reminds one of New England life, while law and order are as good as in any place in New York.

The cost of living is from $40 to $100 per month. I add these details, as they are the subject of frequent inquiry by letter.

I could readily add many pages of notes of cases which have come under my observation, but they are tedious at best, and seldom read. It is of importance to say, however, that experience has abundantly demonstrated the fact that persons who have been relieved of all their symptoms here are extremely liable to a relapse if they return to the place where the disease was originally contracted.

FREDERICK FULLER, M.D.

MANITOU, COLORADO.

PERSISTENT HICCOUGH CURED BY SUBCUTANEOUS INJECTIONS OF PILOCARPIN.—Dr. Ruhdorfer, of Götzendorf, relates the history of a girl nineteen years of age who, for three months, suffered from an obstinate hiccough. All kinds of sedatives were employed in vain. Subcutaneous injections of pilocarpin, gr. ss. in ℥j xv. of water, finally gave relief. Stadler has reported a similar case cured by the same means.

THE ABORTION OF TYPHOID FEVER.

To the Editor of The Medical Record.

Sir: The medical profession is skeptical as to the possibility of aborting typhoid fever. The editor of the *Medical Age* says: "We have given our opinion of the man who claims to abort typhoid fever, and while we may now regret the somewhat inelegant language in which it was couched, we shall not modify it until such evidence is brought to bear against it as will stand the test of science." Now, if Professor Busch can cure sarcomatous tumors with so simple a remedy as mustard and black soap, we need not despair that a scientific remedy to abort typhoid fever will be discovered. In my experience I was never able to accomplish that much-desired feat until in the epidemic of last year, but invariably stood a helpless spectator, witnessing one case after another attacked in the same family. That year I was attending a case in the third week, when two other members were complaining of the initial symptoms, and I gave them the following: Tinct. iodine, gtt x., every six hours; Fowler's solution, tinct. baptisia, āā gtt. v., every six hours, alternated with the iodine, so the doses came every three hours. In addition to the above, if malarial action was present, gave quinine in three-grain doses through the night. The result was abortion in all cases in the prodromic stage, and in a large per cent. of cases in the early stage of the fever before serious lesions of the mucous surfaces had occurred. Was that treatment scientific? The action of iodine and arsenic as bactericides are well known, but baptisia, being more restricted in use to the eclectic school, is not so generally appreciated. It is the vegetable analogue of the other two remedies and principally used because of its eminent antiseptic virtues. I procured the homœopathic mother tincture as the most reliable preparation. After learning the abortive effect of the above treatment I adopted it in a few advanced cases with benefit. The bronchitis improved and in one case the temperature fell two degrees by the next day.

J. M. Ward, M.D.

Cornelia, Mo.

[We print the above not so much for its real value as to show how entirely unconscious of the nature of the problem (which he thinks he has solved) our esteemed correspondent is. He evidently belongs to the "impressionist school" of which we have before written. It is one thing to believe in a remedy, it is quite another to demonstrate its efficacy. In order to do the latter, evidence must be diligently collected and presented. The most careful records of the alleged aborted cases should be made, otherwise the skeptical world will say that they were not typhoid cases at all, but that the patients were, perhaps, a little bilious.—Ed.]

The Condemnation of Vesalius.—*A propos* of a recent painting representing Vesalius starting back affrighted at discovering signs of life in a man whom he supposed dead, and whose thorax he had just opened, M. Bouchut writes in the *Paris Médical* that the subject of the picture is historically incorrect. The story is that upon opening the chest a movement of the heart was detected, which was taken as proof that the subject was yet alive. For this Vesalius was tried before the Inquisition, and condemned to death, but at the urgent solicitation of Philip II. this sentence was commuted to a pilgrimage to the Holy Land. A Spaniard, named Morejon, has shown, however, that no such thing ever occurred. Vesalius was never tried before the Inquisition, and consequently never condemned. His pilgrimage to Jerusalem was made because of ill health, and from pious motives, and it was only with great difficulty that he could obtain from the king, whose physician he was, permission to undertake this journey.

Obituary.

FREDERICK D. LENTE, M.D.,

cold spring, n. y.

Dr. Frederick D. Lente, an eminent physician and surgeon, died at Cold Spring, Putnam County, N. Y., in the sixtieth year of his age, on the 13th inst., of cerebro-spinal meningitis. Dr. Lente was born at Newbern, N. C., in 1823, and was a graduate of both the University of that State and of the University Medical College of New York. After leaving the latter college he studied for a time under Dr. Alfred C. Post, and was afterward, under Dr. Valentine Mott, for two years, on the house-staff of the old New York Hospital, which at that time had attained its greatest reputation. In 1851 he was appointed surgeon of the West Point Foundry, at Cold Spring, and filled that position until 1870, when he came to this city, and was almost immediately appointed to the Chair of Gynecology and Diseases of Children at the University Medical College. He filled other positions of honor and influence in this city, but in 1871 he was compelled to give them up on account of threatened failure of his health. He returned to Cold Spring, and, resuming his former position there, remained until 1875, when he once more left it and entered upon the practice of his profession at Palatka, Fla., during the winter months, and at Saratoga Springs in the summer. Dr. Lente was one of the founders of the American Academy of Medicine and its first President, and at the time of his death he was a member of the Neurological, the Pathological, and the New York and Dutchess County Medical Societies, the American Public Health Association, the Board of Managers of the Hudson River State Hospital, corresponding member of the New York Medico-Legal Society, and honorary member of the North Carolina Medical Society. Dr. Lente had an extensive acquaintance and reputation through the Northern and Southern States as a general practitioner and as a surgeon. He was not only skilful and successful here, but he had an original and observant mind. His numerous contributions to medical literature were always valuable and were widely noticed. His work was characterized by great thoroughness and exactness. Personally, Dr. Lente was very popular among all who knew him, and was warmly esteemed by an unusually large circle of friends.

Navy News.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 13, 1883.

Hiland, Thomas, Surgeon. Granted leave of absence for one year, with permission to leave the United States.

Simon, William J., Surgeon, and Crawford, M. H., Passed Assistant-Surgeon. Ordered to report on November 1st for duty on board the U. S. S. Trenton.

A Case of Congenital Hydrocephalus, with Immense Cranial Development.—Dr. C. I. Conover, of Charleston Four Corners, N. Y., relates the history of a patient, Mrs. D——, whom he had been called to attend in confinement. He found a breech presentation. After a time, no progress being made, and the child being found to be dead, the mother was anæsthetized, and the base of the infant's skull punctured. About three pints of hydrocephalic fluid flowed away. The child was finally expelled. All parts of the child were normal except the head, which measured, we are told, twenty-three inches, the normal measurement being thirteen. Dr. Conover has preserved the head in a bottle to convince the incredulous.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 16, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 9, 1883.....	0	74	42	8	10	29	0	0
October 16, 1883.....	0	59	40	4	17	37	0	0
Deaths.								
October 9, 1883.....	0	25	2	6	5	14	0	0
October 16, 1883.....	0	19	5	3	4	13	0	0

STATE VETERINARY SOCIETIES have recently been organized in Illinois, Michigan, Wisconsin, Ohio, Indiana, Iowa, and Pennsylvania. It is proposed to organize one in this State.

ASTHMA CURED BY GALVANIZATION OF THE NECK.—Dr. Peter Eade reports a case of essential asthma of a year's standing cured by galvanizing the neck. The current was applied daily for ten days.—*British Medical Journal.*

THE STEREOSCOPE IN THE STUDY OF ANATOMY.—Mr. S. F. Elliman has been making experiments with reference to the use of the stereoscope in illustrating the anatomy of the domesticated animals. He exhibited his pictures before the Veterinary Society of the Gironde. The following comments are quoted by the *Journal of Comparative Medicine:* "Applied to anatomical subjects the stereoscope causes to stand out in a manner not less remarkable the complicated parts; it prolongs the view to the bottom of the great nervous cavities; it detaches the muscle from the bone which it covers; in short, it recalls to the student, as to the surgeon, the anatomical peculiarities belonging to each region of the body. One might say, to a certain point, that, thanks to this instrument, it is possible to study anatomy in one's own room; that is to say, without operating on the dead body, by the aid of which the conformation of the organs is generally studied. The application of the stereoscope to anatomical studies is, then, a very happy idea, and of which one must allow the Bordeaux Exhibition has given the first example."

IN A CASE OF HEMORRHAGE FROM THE INTERCOSTAL ARTERY, from homicidal stabbing, I arrested the flow immediately by making pressure within the pleural cavity, directly on the vessel, by introducing into the wound the handle of a door-key. The key was then turned transversely, so as to make direct pressure, and maintained in that position for some hours, until there was no more tendency to hemorrhage. The same mechanical action might be effected by the similar use of the handle of an ordinary gimlet.—DR. LEVIS, Philadelphia.

HOW TO HANG.—The death of Marwood, the London hangman, has revived a melancholy interest in the best methods of strangling people. An English journal describes a new invention in this particular line which is said to be remarkably effective. The inventor brought his machine to London and showed it to various persons there. A reporter who examined it writes: On near examination it was found that the rope was the ordinary half-inch white hemp, passed double through a brass clamp, forming a loop which could be adjusted to the exact thickness of the neck of the criminal. Immediately before the clamp was fitted a brass crescent measuring nine inches from tip to tip and projecting three inches from the rope. This brass crescent is so adjusted as to lie on the shoulder of the condemned, while the double rope is looped on one side so as to allow a drop of from two to four feet. The principle of the invention is that the moment the criminal is swung off the crescent presses against the side of the head, while the rope pulls the neck sharply in the opposite direction, snapping the spinal column like a stick of sealing-wax, and occasioning instant death. "It cannot fail," said its inventor, as he lovingly fitted the hempen loop round the neck of one who was present at the interview, and screwed the clamp tight at the right distance. "It will hang you sideways, back or front, just as you like; it cannot fail; just drop off this table and it will be quite sufficient. No need of a long drop, no pulling men's heads off their shoulders; everything painless; the very invention that is wanted. The leverage gained by the three-inch projection of the brass crescent will snap any one's neck." "But might not the rope snap?" he was asked. "No, because its double; Marwood uses a five-eighth inch rope for a long drop; one-half inch double for a short drop will be more than is necessary. Jack Ketch always used the one-half inch. The thinner the rope the surer the job. You can hang a cat with a whipcord, but not with a half-inch rope." "How did you try your experiments?" "By making lay-figures of various weights, fixing a block of wood as a head on a stout pole, surrounded by wire springs to represent the vertebræ of the neck. I have tried it with many weights and many lengths of drop, and never found it to miss. In the cause of humanity and civilization I appeal to you to secure the adoption of this humane invention." The inventor, after disengaging the apparatus, then left for the Home Office, carrying with him his invention for presentation to the Home Secretary. His name is Scholefield, and he is now working at Palmer's ship-yard at Jarrow.

A VIAL FOR CARRYING SOLUTIONS FOR HYPODERMIC USE.—Dr. S. Mitchell, Jr., of Hornellsville, N. Y., sends the description of a vial which he has devised for carrying solutions for hypodermic use. The object is to provide a vial from which the solution can be readily drawn into the syringe. To accomplish this a tube perforated at the lower end is passed through the closed top of the vial to its bottom. The upper end of the tube is funnel-shaped. The needle is passed down into the tube and easily sucks the solution out of it.

DR. HOLMES' ADVICE TO A YOUNG PHYSICIAN.—Dr. Holmes, some years ago, wrote as follows to a young man who requested his advice about becoming a doctor: "My dear young friend—To be a physician the following requisites, if not absolutely necessary, are very desirable: First—A sound constitution. The wear and tear are very great, and cares, broken rest, irregular meals, and exposure of all kinds demand great stamina. Second—An unselfish nature. You must always think of your patient's welfare, not of your own comfort or habits. Third—You must be content to wait a long time before you establish a paying reputation. Fourth—Much of your work being distasteful, wearisome, wearing to the body, and almost fruitless to the mind, you must gradually harden yourself to the routine, and for this you ought to have an easy and accommodating temper. Fifth—You must be in constant familiarity with suffering of all kinds, which must either make your feelings tough, or keep you in distress. Medicine is very exacting. I don't believe much in literary doctors. I would not have one that was in the habit of scribbling verse, or stories, or anything of the kind. Yours, very truly, O. W. HOLMES."

DERIVATION OF THE WORD CHARLATAN.—In former times physicians received and treated their patients in their own (the physicians') houses, and seldom made visits outside, or if they did they went on foot. But there

came to Paris at one time a medical genius who knew how to care for himself better than he did to cure his patients. His name was Latan. He had a wagon (char) filled with medicines, and used to drive about through the streets seeking out patients and proclaiming the virtue of his remedies. He was the first travelling-doctor, and as he went through the streets the people used to say: "*Voilà le char de Latan.*" From this came the abbreviated form, charlatan, which came to be applied to all travelling quacks.—*Berliner Tagesblatt.*

The commonly accepted derivation of the word is from circulatanus, a corrupted form of circulator.

Pathological Specimens from Prehistoric Times.—At the recent meeting of the French Association for the Advantement of Science, Dr. Prunières exhibited some bones found by him among the remains of the cave dwellers. There were specimens showing fractures united without deformity in the long bones, and one fracture of the atlas, with the fragments united to the axis in such a way as to reduce to one-third of its normal size the vertebral canal. There were also several vertebræ showing a spina bifida, the subject of which had lived to adult life in spite of the lesion.

Cystic Tumor of the Thigh following Rupture of the Capsule in Morbus Coxarius.—Dr. Alfred M. Leonard, of Camden, N. Y., reports a case under the above title. The patient, a young lady, at the age of thirteen fell from a tree striking squarely on the heel. She experienced some pain in the right knee and the limb continued to be weak. Three years later she fell while skating and struck upon the right hip Inflammation of the joint set in. The patient was put in bed and extension applied. This was followed by the use of a long hip splint. After about three months symptoms of rupture of the capsule appeared. At the same time a small tumor made its appearance below, and behind the trochanter major, which increased rapidly in size, extending downward and laterally, soon necessitating the removal of the splint. It was accompanied by a complete cessation of all inflammatory symptoms; she has had no pain, or discomfort otherwise than that caused by the bulk and weight of the tumor, or any febrile symptoms that would indicate toxæmia. An operation was performed, and ninety-two ounces of thin yellowish fluid withdrawn, containing large quantities of cholesterin crystals, mucin, and epithelium. The sac was removed, adhesions broken, and the wound dressed antiseptically. The wound healed by first intention, except a small fistulous opening which continues to discharge a thin, whitish fluid. The patient walks with a limp, but without artificial support. The movements of the joint are perfect and the limb but little shortened.

A Case of Cyanosis in which the Inter-Auricular and Inter-Ventricular Septa were both Deficient.—Dr. Hattie A. Gallatin, of Cleveland, O., reports the case of a male infant, eight months old, who suffered from cyanosis and occasional fainting spells. The child lived to be two and a half years of age. It was tall and delicate, with a disproportionately large head. The face, arms, and upper part of the body were usually œdematous, the surface cold, the patient chilly. The antero-posterior diameter of the chest was increased, the area of cardiac dulness large. Various murmurs were heard at times, the most constant being a *presystolic rippling* sound. The cyanosis was not always present, but came on in paroxysms with accompanying dyspnœa and orthopnœa. The paroxysms, at first rare, gradually increased in frequency until death. The appetite was good. There was considerable diarrhœa. The autopsy revealed the following conditions: heart normal in position and very large; lungs normal, though somewhat compressed by the heart, and dark colored; pericardium greatly congested, and usual quantity of pericardial fluid; the heart was of the size of the adult female heart, with right auricle of unusual size; aorta, pulmonary artery, pulmonary veins, and venæ cavæ normal in position. Right auricle found to be very greatly dilated, being capable of holding two fluidounces. The foramen ovale was open about three-fourths of an inch in diameter with lax margin. The annulis ovalis seemed entirely wanting. No trace of Eustachian valve, Openings of cavæ, the walls, appendix, and musculi pectinati, all normal. The auriculo-ventricular opening was a little large. Right ventricle: capable of holding two fluidounces. Walls one-half inch thick. Columnæ carnæ, chordæ tendinæ, and tricuspid valve normal. On attempting to pass a probe from the ventricle through the pulmonary artery, to my surprise the other end appeared in the aorta. Closer examination showed the inter-ventricular septum to be deficient at its upper margin, so that the aorta and pulmonary artery both communicated freely with either ventricle, or with both; most freely, however, with the right. The opening was thee-fourths of an inch in diameter, and at the upper margin of the inter-ventricular septum. The semilunar valves of aorta and pulmonary artery were perfect. Left auricle: capable of containing less than an ounce, while the right had a capacity of two ounces; otherwise normal. Left ventricle: capacity of one and a half ounce. No abnormality but the deficient septum. Cases of cyanosis in which the inter-auricular and inter-ventricular septa are both deficient are not of frequent occurrence. Smith, in his table of one hundred and sixty-four cases, does not mention any of this variety, unless he includes them under cases of "one auricle and one ventricle," which seems improbable, as both septa were present though imperfect. Other authors mention this condition, but he has not been able to find any reliable statistics concerning it. Nor has he found any satisfactory cause assigned for the almost complete remissions of cyanotic symptoms noticeable in nearly all cases. In some malformations the possibility of well-oxygenized blood circulating exists, but in many others it is precluded by the nature of the malformation, as in the case above recorded. Why, then, and how, do the remissions occur? Can any one enlighten me? It is manifestly impossible that when both septa are deficient pure arterial blood should at any time circulate, yet in this case, during the first eighteen months of life, the remissions were apparently complete, and often no cardiac murmur could be detected. That the treatment mitigated the symptoms and prolonged life I have no doubt. For some months the patient took morphia in infusion digitalis with marked benefit, the paroxysms becoming more severe and lasting longer whenever the medicine was omitted for a day. On several occasions when the cardiac disturbance was particularly intractable, marked benefit was derived from the use of chloral hydrate in hypnotic doses.

Cattle affected with Cancer.—The Sanitary Inspector of Chicago announces the discovery of numerous cases of cancer (?), generally of the tongue, among the stock-yards of that city.

Death of an Old Practitioner.—On October 7th Dr. John C. Tibbets, aged ninety, died at his home in Warsaw, N. Y. He claimed to be the oldest continuous practitioner in the State, if not in the United States, having been engaged actively for seventy-one years in his profession. He was graduated when only eighteen, and began practice with his father at Warwick, R. I. He was United States Examining Surgeon for many years.

Medical Examiners in Place of Coroners in Rhode Island.—A bill was introduced into the Rhode Island Legislature last May abolishing the coroner system and substituting medical examiners as in Massachusetts. The bill under the rules passed over to the December session. At the quarterly meeting of the Rhode Island State Medical Society, the subject was discussed,

and the bill, in its general features, was unanimously approved. Dr. Williams, of Boston, an honorary member of the Society, was present, and explained the medical examiner law of Massachusetts. This law, he said, worked to entire satisfaction and with manifest economy. The cost to the State is about two-thirds that of the old coroner system, and in large cities where the services of the examiner are required it is even less. The results to the prosecuting officer are much more satisfactory. The report is made by an expert in scientific legal style, instead of in the miscellaneous way so common under the coroner system.

THE PROPHYLACTIC USES OF CATS.—Dr. F. Bradnack, of New York, sends us the following curious history: "Some time ago I was hastily called to a house on Eighty-sixth Street. Briefly stated, what I found was as follows: A young woman (German), having occasion to go out, had left her infant, aged sixteen months, laid upon a pillow by an open window. Her carelessness was promptly rewarded, for she had not been gone three minutes before the child fell out of the window and struck upon a stone pavement about twelve feet below. It was picked up and carried into the house by one of the neighbors. I found, upon examination, that the back (dorsal and lumbar regions) was badly contused. Naturally expecting to find the skull fractured, I made a minute and careful exploration. To my astonishment, there was neither cranial fracture nor displacement. There was not even a scalp abrasion apparent. Puzzled at this, I asked if any one had actually seen the child fall from the window. This question produced one of the neighbors, an intelligent man, who deposed as follows (I quote the substance of his statement): 'The reason why the child's head was not smashed by striking the pavement is that exactly under the window from which it fell there lay asleep a large tom-cat. The head of the child struck squarely upon the belly of the cat. I was standing close by at the time, and saw it.' Upon my expressing some incredulity at so unprecedented a coincidence, the man asseverated that the facts were exactly as he had stated them. I dressed the child's back with simple anodyne and emollient applications, and prescribed a small quantity of chloral hydrate to insure sleep. The next day, barring the superficial abrasions over the dorsal and lumbar regions (which soon after healed entirely), the child was doing quite well. What was perhaps fully as strange is the fact that the cat was sitting on the hearth, and also doing 'as well as could be expected under the circumstances.' From subsequent inquiry, I learned that another man also witnessed the fall. He was considered a trustworthy person by his neighbors. He fully confirmed the testimony of the first narrator. In short, there is no reason for doubt concerning this remarkable coincidence. They who are too hasty in denouncing the feline race as a nuisance would perhaps do well to bear this case in mind."

REGISTERED PHYSICIANS IN LOUISIANA.—In accordance with a law passed by the Legislature in 1882, it is now obligatory upon all physicians practising in Louisiana to be registered by the Board of Health. The number of physicians thus registered up to July, 1883, was 559, of whom 156 were practising in New Orleans. Two parishes are reported as being without a duly qualified physician, and in Union Parish all the practitioners, to the number of nine, are registered as without diploma, their qualifications being a more than five years' practice before the new law came into effect.

THE SANITARY COUNCIL OF KENTUCKY.—The second semi-annual meeting of the Sanitary Council was held at Glasgow on Tuesday, October 2d. In the absence of the president, Dr. J. A. Dixon, Dr. B. H. Grinstead was called to the chair. Dr. J. N. McCormack, of Bowling Green, Secretary of the State Board of Health, was elected permanent secretary. Dr. Grinstead, Health Officer of Glasgow, read a carefully prepared paper on "The Adulteration of Medicines," with special reference to the prevention of such adulteration. This was followed by a paper, by Dr. J. S. Linch, of Glasgow, on "The Management of Small-pox, and its Restrictions." Both of these papers elicited interesting discussion, the speeches being limited to five minutes. Dr. J. W. Holland, of Louisville, presented an elaborate paper on "The Cause and Prevention of Cholera," citing the history of the disease in many cities and towns of the State in 1873, to support the commonly accepted view that the disease is miasmatic, contagious in character, and was to be controlled by cleanliness, isolation, and the careful disinfection of the alvine discharges, and everything with which they come in contact. The discussion of this paper concluded the day session. A large and intelligent audience greeted the council at the evening session. Dr. R. M. Alexander read a carefully prepared paper on "The Reasons for Sanitary Legislation," and was followed by Dr. Pinckney Thompson, of Henderson, with an excellent and thoroughly practical paper on "Domestic Hygiene." Dr. Holland read a paper by Prof. L. Eddy, of Danville, on "The Reciprocal Relations of the People and the State Board of Health." Dr. McCormack presented "A Plea for the Teaching of Hygiene in the Schools." Prof. A. W. Mell, of Glasgow, made an address on "School Hygiene." The Council adjourned to meet in Bardstown on the first Tuesday in April, 1884. The Sanitary Council is a voluntary organization, open to all persons in the State interested in the question of public health, and is purely advisory and educational in character. This was the first working meeting, the initial meeting having been held in Louisville in March last, and the attendance and interest manifested encourages the originators of the organization to expect much good from it. It was called and the first meeting held under the auspices of the State Board, but the intention is to keep it entirely distinct from that body. The experience at Glasgow teaches that the work of the Council cannot be gotten through with in one day and night, and the programme for Bardstown will be so arranged as to give more time.

STATEMENT OF DEATHS FROM YELLOW FEVER AT VERA CRUZ, 1881, 1882, and eight months in 1883.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1881	28	21	27	28	94	234	132	39	22	24	18	4
1882	1	1	2	1	5	11	7	14	8	5	5	12
1883	5	3	7	16	90	261	200	67				
Totals	34	25	36	45	189	506	339	120				

Total for 1881	671
" 1882	72
" 1883 (eight months)	649

DEATH FROM AN OVERDOSE OF CARBOLIC ACID.—A death was caused recently in the Hôpital Tenon of Paris from the careless administration of carbolic acid by one of the nurses. The victim was a young girl, suffering from typhoid fever, for whom a potion containing phenic acid was ordered. The head nurse, whose duty it was to administer the medicines, althongh she had nothing to do at the time, told one of her assistants to measure out the dose. The latter did so, using the wrong measuring-glass, and gave the poor patient over an ounce of pure carbolic acid.

THE USE OF LARGE DOSES OF ACONITIA IN SCIATICA.—Dr. J. D. Mulhane writes to us in reference to Dr. Tilton's criticism of the dosage of aconitia. He states that he had an obstinate case of sciatica in a man, a hammerer on the Pan Handle Railroad. He gave him finally aconitia in doses of gr. $\frac{1}{100}$ three times a day, or gr. $\frac{1}{50}$ per day. The patient was relieved and able to resume his work.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 17 NEW YORK, OCTOBER 27, 1883 Whole No. 677

Original Articles.

THE ARCHITECTURE AND FUNCTIONS OF THE CEREBELLUM.[1]

BY AMBROSE L. RANNEY, M.D.,
NEW YORK.

The cerebellum.— The cerebellum or "hinder-brain" consists of two lateral hemispheres, joined together by an intermediate portion, which is called, from a fancied resemblance to a worm, the "vermiform process." The peculiar appearance of this process is due partly to its shape and partly to transverse ridges and furrows which are very apparent. When the under surface of the cerebellum is examined, this process appears as a well-marked projection, the "*inferior vermiform process.*" On the upper surface it is only slightly elevated, forming the so-called "*superior vermiform process.*" In birds as well as in some animals lower in the scale, the vermiform process alone exists.[2] It is the part first developed in mammals. In most mammals, moreover, it constitutes a distinct central lobe, clearly demarcated from the lateral portions—the hemispheres of the cerebellum.

The *cerebellar hemispheres* are separated behind by a deep notch. Below, a deep fossa (*vallecula*), which is continuous with the notch seen posteriorly, lodges the inferior vermiform process. This hollow also receives the medulla in front and the falx cerebelli behind. The hemispheres are convex on their lower surface and tend to partly conceal the inferior vermiform process; above, however, they are somewhat flattened in the centre and slope downward toward the sides, causing the slightly elevated superior vermiform process to be less distinctly outlined than the inferior.

The cerebellum measures about three and a half inches transversely, about two and a half inches from before backward, and about two inches in depth at its thickest portion, although it thins out at its lateral borders.

The surfaces of the cerebellum are everywhere marked by deep, closely set, transverse, and somewhat curved fissures. These are often of considerable depth, the larger ones concealing many folia which do not reach the surface of the cerebellum. Some of these fissures are better marked than the rest, the most conspicuous being the *great horizontal fissure*, which starts in front at the middle peduncle and extends around the outer and posterior border of each hemisphere, being prolonged into the posterior notch where it joins with its fellow of the opposite side. This fissure separates the cerebellum into an upper and lower portion, which correspond to the upper and lower surfaces. Each of these portions are subdivided by fissures, somewhat more distinct than the rest, into small lobes. The names of these lobules can be found in any work upon descriptive anatomy. The *tonsillæ* and *flocculi*[3] are the more important. The vermiform process, or "worm," is also subdivided into lobules. Physiological experiment or pathological research has not yet positively located any special functions in these lobules, so that they are of use chiefly in describing the situation of lesions of the cerebellum and the course of fibres to the cerebellar cortex.

Sections made through the substance of the cerebellum show a beautifully foliated or arborescent appearance, named "arbor vitæ," in consequence of the medullary or white substance of the ganglion being prolonged into the laminæ. The main branches of the medullary substance, or groups of them, correspond to the lobules of the cerebellum. These are connected, as the cerebral convolutions are, by festoon-like fibres (fibræ propriæ). The medullary substance is more abundant in the hemispheres than in the worm (vermiform process). In the centre of each hemisphere a nucleus of gray matter, the so-called "*corpus dentatum*" is seen in all vertical and transverse sections of that region. In structure it resembles that of the olivary body of the medulla oblongata, having a wavy layer of yellowish-brown substance externally, and white matter in its centre. At its upper and inner part this wavy layer is interrupted, so that the plicated capsule is not complete. The fibres which are contained within the processes cerebelli ad cerebrum (superior peduncle of cerebellum) and the valve of Vieussens may be traced, in part, to the corpus dentatum. Stilling, who has made elaborate researches respecting the minute structure of the cerebellum, describes three other collections of gray matter within the white centre of the hemispheres. These are named the "*nucleus emboliformis*," the "*nucleus globosus*," and the "*nucleus fastigii.*" These nuclei are not distinctly isolated in all parts, but are connected, here and there, with one another and with the corpus dentatum. Their functions are not yet determined. The "*nucleus fastigii*" is often called the "nucleus of the ventricular roof." It is situated in the white mass of the worm, and lies in the roof of the fourth ventricle. It probably receives fibres of the *auditory nerve*-root and the *trapezium.* This nucleus is separated from its fellows by a thin septum of white matter. The two other nuclei described by Stilling lie in intimate relation with the denate nucleus of the hemisphere.

The cerebellum, as a whole, is described as possessing *three peduncles.* These are collections of nerve-fibres which pass out from, or into, the substance of the hemispheres. The *superior* peduncles (*processi cerebelli ad cerebrum*) are directed upward and forward from the mesial part of the hemispheres. The *middle* peduncles (*processi cerebelli ad pontem*) emerge from the lateral part of the hemispheres and pass to the pons varolii. The *inferior* peduncles (*processi cerebelli ad medullam*) escape from the hemispheres of the cerebellum between the other two; pass forward, outside of the superior peduncles to reach the lateral wall of the fourth ventricle; and then turn sharply downward to become the so-called "restiform bodies" of the medulla oblongata. Each of these processes will be considered separately.

We are now prepared to consider the minute structure of the cerebellum and its processes. The various theories which have been advanced in regard to the probable functions of this ganglion can be intelligently discussed only after a knowledge of its connections with other regions of the cerebro-spinal system. Experimental physiology frequently conflicts with the observed effects of pathological lesions of the nerve-centres. This is due chiefly to the fact that many of the so-called "ganglia" of the brain, which were regarded by the older anatomists as homogeneous structures, are now known to consist of

[1] A part of a course of lectures delivered before the students of the University of the City of New York.

[2] The *vermiform process* appears to be a complete ganglion in itself, associated with its own nerve-tracts. The *cerebellar hemispheres* are added, in the higher grades of animals, in proportion to the development of the cerebral lobes.

[3] The *flocculus* is believed by some authors to be directly associated with a fasciculus derived from the pneumogastric nerve.

collections of distinct nuclei or "centres," each of which may possess different peripheral connections; moreover, important nerve-strands, which are often connected with remote collections of nerve-cells, also traverse these nodal masses of gray matter, in some instances.

The cerebellar cortex.—The external gray matter of the cerebellum differs in its microscopical appearance from that of the cerebrum, which has been described in a previous lecture. It consists of three layers: an outer, consisting of both cells and fibres; a middle, consisting of large cells, termed the "corpuscles of Purkinje;" and an inner, which is reddish-gray in color and of a granular structure.

In the *outer layer* most of the fibres have a direction at right angles to the surface of the cerebellum. The greater proportion of these fibres are simply the prolongation of the processes of the large cells of the middle layer (cells of Purkinje). Others are fine, tapering fibres, which seem to rest by a broad base on the pia mater, which covers the outer layer. These fibres make up a dense felting, enclosing free nuclei and scattered cells. The cells of this layer are granule-like bodies, the larger of which are apparently connected with the processes of the cells of Purkinje. The smaller probably belong to the matrix; the larger are supposed to be nervous in function. Along the innermost portion of the outer layer nerve-fibres may be also demonstrated, which run parallel with the surface of the cerebellum.

The *middle layer* is characterized by the peculiar cells[1] found embedded in it—the "cells of Purkinje." Most of these cells are flask-shaped, although a few are irregular in form. The long axis of the cell is placed at a right angle to the free surface of the cerebellum. Their diameter varies from $\frac{1}{300}$ to $\frac{1}{1000}$ of an inch. Two sets of processes may be demonstrated as arising from these cells, viz., one passing through the outer layer of the cerebellar cortex and one passing through the inner layer. The former are of large size and are connected, in some instances, with the corpuscles of the outer layer; others pass directly through the layer to become lost at its surface. In either case, they subdivide repeatedly in their passage through the outer layer. The inner set of processes are fine and undivided, and pass into the granule-layer, where some probably become continuous with the axis-cylinders of nerve-fibres composing the medullary portion.

The *inner layer*, called the "granule layer," lies next to the medullary centre of the cerebellum.[2] It consists of granule-like corpuscles which are imbedded in groups in a gelatinous matrix. Nerve-fibres can be demonstrated to join with the processes of the cells of Purkinje within this layer. The cells of this layer are both round and angular. Each consists of a nucleus, a thin envelope of protoplasm, and processes which unite with the plexus of nerve-fibres in its vicinity. They measure from $\frac{1}{3500}$ to $\frac{1}{4000}$ of an inch.

It will be evident, after this hasty description, that the cortex of the cerebellum differs markedly from that of the cerebrum, in spite of the various structural types of the latter. The cells of Purkinje are characteristic of the cerebellum alone. The number of layers is less than in the cerebral cortex. We are apparently justified in attributing to the cerebellum some functional attributes of a special type, because similar anatomical elements are to be found in no other region. The theories which have been advanced respecting the functions of this ganglion will be considered later.

In cross-sections of each fold or lamina of the cerebral cortex may be seen a central medullary or white portion, resembling the stem and diverging branches of a twig, with its attached leaves. This "*medullary centre*" can be shown to consist of bundles of fibres which run parallel with each other or interlace, until they turn obliquely into the gray matter of the cortex. It is still undecided whether these fibres terminate in the "granule layer" of the cortex, becoming joined to the axis-cylinder processes of the cells of Purkinje, or by a union with the plexus of fine fibres described as existing in the outer layer.

The central white substance of the cerebellum.—The peduncles of the cerebellum have been mentioned in the early part of this lecture, but much remains to be said respecting the probable course of the fibres contained in each, during their passage through the white or medullary centre of the cerebellum. The course which they pursue outside of the limits of this ganglion will also merit subsequent attention.

The fibres of the *superior peduncle* (Fig. 1) can be traced almost entirely into the interior of the "nucleus dentatum;" although a few can be demonstrated to pass around the outer side of this central mass of gray matter without entering it, and some mesial fibres can be shown to enter directly into the white substance of the vermiform process. As was stated to be the case with the corpus striatum and the optic thalamus, it is probable that a few of the fibres which apparently enter the substance of the nucleus dentatum do not become joined with the cells of that body, but simply pass through it to go to the cerebellar cortex; on the other hand, it is equally probable that most of the fibres which enter it become associated more or less intimately with the cells found within that body, and that they are subsequently continued to a peripheral termination in some part of the cortex. The fibres which enclose the nucleus dentatum are so matted together into a feltwork that it is impossible to trace the course of even distinct bundles from their entrance into the cerebellum to their termination in the cortex.

The fibres of the *middle peduncle* leave the pons, to enter the lateral part of the white substance of the cerebellum as two main bundles. One is composed of the superior transverse fibres of the pons; the other consists of the lower transverse fibres of the pons mingled with those of the *inferior peduncle* of the cerebellum (*restiform body of the medulla*). The upper bundle passes obliquely downward over the lower, and enters the lateral and anterior portions of the medullary centre of the hemisphere. The lower bundle, after joining with the fibres of the restiform body of the medulla oblongata, turns upward, and radiates into the upper part of the medullary centre of the corresponding hemisphere of the cerebellum and the upper part of the vermiform process. Stilling states that the fibres of the restiform body pass, in part, into the nucleus dentatum, while the rest curve over the nucleus, the so-called "semicircular fibres."

Finally, certain *commissural fibres* are described by Stilling as existing in the cerebellum. These may be divided into two sets. The first are analogous to the commissural fibres of the cerebrum, crossing the median line and probably joining homologous regions of the cerebellar cortex in the two hemispheres; the second analogous to the collateral fibres of the cerebrum, connecting one lamina of the cortex with another and arching around the fissures between the laminæ. The latter set are confined to one hemisphere and do not cross the median line of the cerebellum. The direction of these fibres is transverse to that of the "peduncular" cerebellar fibres.

It is evident, therefore, that the general arrangement of the cerebellar fibres bears a striking resemblance to that of the cerebrum; the *nucleus dentatum*, *olivary body*, *red nucleus*, and *gray matter of the pons* being the analogues of the basal ganglia of the cerebrum, and the "radiating," "commissural," and "associating systems" being similar in many respects.[1] The cerebellum, like the cerebrum, may be said, therefore, to exhibit three

[1] The bodies of these cells are colossal (sixty to seventy millimetres in length, and twenty to thirty millimetres in thickness). They appear to be enclosed within a loose-fitting capsule, formed of connective-tissue fibres (Obersteiner).

[2] The striking resemblances between this layer and the granular strata of the *olfactory lobe* have been commented upon by Meynert. The cells of this layer are regarded by Gerlach as connective-tissue elements; by Henle and Merkel as lymphoid elements; and by Stilling as small multipolar nerve-cells.

[1] See article by the author in the New York Medical Journal, April, 1880.

so-called "projection systems" of fibres, as follows: 1, the *inner* projection system, the fibres of which serve to connect the cortex of the cerebellum with the nucleus dentatus of the same hemisphere and the olivary body, the red nucleus of the tegmentum, and the anterior gray substance of the pons varolii of the opposite side; 2, the *middle* projection system, the fibres of which connect the enumerated masses of gray matter with the gray matter of the spinal cord; 3, the *outer* projection system, the fibres of which are included in the expansions of the central tubular gray matter to the periphery of the body by means of the spinal nerves.

The following diagram will help to make certain points clear regarding the intimate structure of the cerebellum and its connections with adjoining parts. It is, of course, purely schematic, but, if used in connection with actual representations of the parts, it will prove of great value in comprehending many statements which are to follow. In this diagram the shaded parts represent collections of gray matter, the lines indicate the direction and extent of individual sets of nerve-fibres which are in direct communication with the shaded masses.

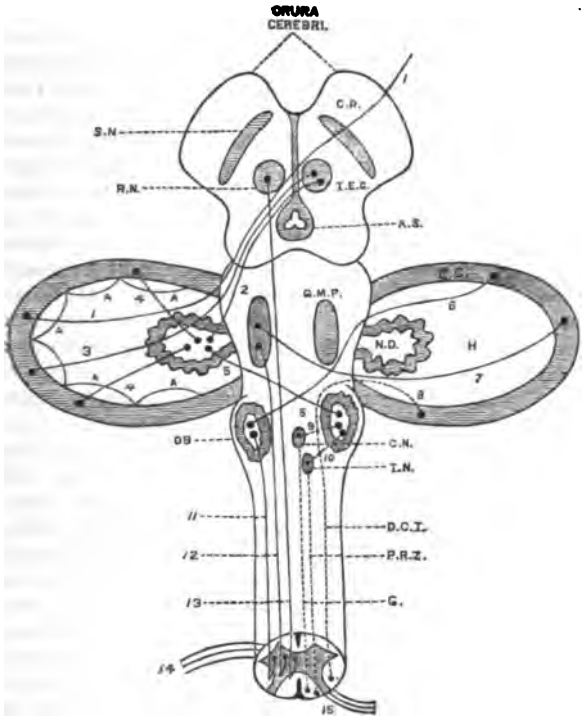

FIG. 1.—A Diagram designed to Illustrate the Various Sets of Fibres comprised within the Cerebello-Spinal System. (Modified from Ross.) C.R., crusta cruris; T.E.G., tegmentum cruris; A.S., aqueduct of Sylvius surrounded by the tubular gray matter; S.N., substantia nigra; R.N., red nucleus of the tegmentum; G.M.P., anterior gray matter of the pons; C.C., cerebellar cortex; N.D., nucleus dentatum; O.B., olivary body; C.N., clavate nucleus; T.N., triangular nucleus; D.C.T., fibres of the "direct cerebellar tract" of the spinal cord; P.R.Z., fibres of the "posterior root zone" of the same; G., fibres of the "column of Goll"; 1, cerebro-cerebellar fibres; 2, fibres from the red nucleus of the tegmentum to the dentate nucleus of the cerebellum; 3, fibres from the red nucleus to the cerebellar cortex; 4, fibres from the cerebellar cortex to the dentate nucleus; 5, fibres from the dentate nucleus to the olivary body of the opposite side; 6, fibres from the cerebellar cortex to the olivary body of the opposite side; 7, fibres from the cerebellar cortex to the anterior gray nucleus of the pons of the opposite side; 8, fibres of the direct cerebellar tract; 9, fibres connecting the clavate nucleus and the olivary body of the same side; fibres connecting the triangular nucleus and the olivary body of the same side; 11, fibres passing from the olivary body to the horns of spinal gray matter; 12, fibres passing from the anterior gray matter of the pons to the horns of spinal gray matter; 13, fibres passing from the red nucleus of the tegmentum to the anterior horns of the spinal gray matter; 14, fibres escaping from the spinal cord through the anterior root of a spinal nerve; 15, fibres of the posterior root of a spinal nerve entering at the posterior horn of the spinal gray matter. The dots in the cut end of the spinal cord, near to 15, indicate the relative position of the different tracts with which they are connected. A, A, A, represent fibres which are destined to connect different convolutions of the cerebellar cortex (*fibræ propriæ*).§

The arrangement of the middle projection system of fibres pertaining to the cerebello-spinal apparatus is less definitely settled than that of the cerebro-spinal. It is probable, however, that the cerebellum receives afferent sets of fibres (sensory) from the spinal cord, and gives off also certain efferent sets of fibres (motor), which are brought into more or less direct communication with the motor tracts of the crura, pons varolii, medulla, and spinal cord.

The *afferent fibres* of the cerebellum probably reach that ganglion through the following channels:

1. By means of the *columns of Goll* (G.), which terminate in the so-called "*clavate nucleus*" (C.N.).

2. By means of the *columns of Burdach* or the *posterior root zone* (P.R.Z.) of the spinal cord, which seems to be structurally related with the so-called "*triangular nucleus*" (T.N.).

3. By means of fibres which connect the *triangular* and *clavate nuclei* with the "*olivary body*" of the corresponding side of the medulla oblongata (9 and 10).

4. By means of the "*direct cerebellar tract*" of fibres (D.C.T.) which is found within the lateral column of the spinal cord near to the extremity of the posterior horn of the spinal gray matter.

5. By means of fibres connected with the *auditory*, and possibly with the *sensory root* of the *fifth cranial nerves*. The auditory fibres are associated chiefly with the corpus dentatum and the nucleus fastigii. They decussate either in the medulla or cerebellum. They pass through the auditory nucleus before entering the cerebellum.

The *efferent fibres* of the cerebellum[1] are probably comprised within the following fasciculi:

1. Bundles of fibres which connect the *dentate nucleus* and the *cerebellar cortex* with the *corpus striatum*, by means of the "processus cerebelli ad cerebrum." This bundle is also in intimate relation with the red nucleus of the tegmentum, and probably is structurally related with some of the nerve-cells found in that nucleus (2 in Fig. 1). Luys believes that the corpus striatum is charged, when its nervous force becomes exhausted, by means of this process of the cerebellum. If this be the case, the cerebellum exerts some influence upon the motor impulses emitted from the cerebral hemispheres; because all such impulses are probably modified within the corpora striata before they are transmitted to the more distant parts of the nervous apparatus (the gray matter of the spinal cord, and the spinal nerves). The probable relations of cerebral and cerebellar influences upon muscles will be discussed later.

2. Fibres which connect the *red nucleus of the tegmentum* with the anterior horns of the spinal gray matter (13).

3. Fibres which connect the *olivary bodies* of the medulla oblongata with the anterior horns of the spinal gray matter (11).

4. Fibres which connect the *anterior gray substance of the pons Varolii* with the anterior horns of the spinal gray matter (12).

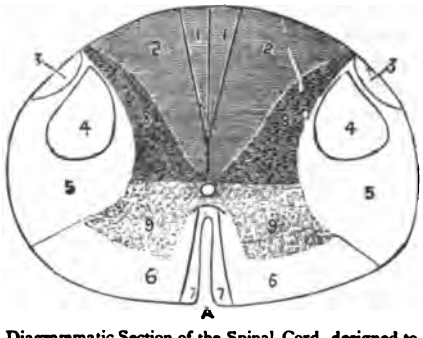

FIG. 2.—A Diagrammatic Section of the Spinal Cord, designed to Illustrate the Situation of Various Nerve-Tracts. (Seguin.) A, anterior fissure; P, posterior fissure; 1, columns of Goll; 2, columns of Burdach; 3, direct cerebellar column; 4, crossed pyramidal column; 5, lateral column; 6, anterior fundamental column; 7, direct pyramidal column; 8, posterior gray horns; 9, anterior gray horns; shaded part, æsthesodic system; unshaded part, kinesodic system.

The diagram of the various segments of the spinal cord, to which I now direct your attention, will help, if used in connection with the preceding one, in comprehending the course of the various bundles of fibres mentioned.

[1] If the brain be considered as a whole, fibres passing from the cerebellum to the cerebrum by means of the superior and middle peduncles, as well as those passing to the tubercular quadrigemina, by means of the valve of Vieussens, may be classed as *afferent fibres*. Spitzka denies the existence of *efferent* cerebellar fibres (outside of the superior and middle peduncles).

From the imperfections of our present knowledge, much that is stated here regarding the exact course of the afferent and efferent impulses of the cerebellum must be somewhat conjectural. The results of experimental physiology and of pathological research are not, and cannot well be, of a positive character. Many conflicting theories have been at different times advanced regarding the functional attributes of this ganglion. These will be considered when the anatomical data have been fully presented.

Processus cerebelli ad cerebrum (*processus e cerebello ad testes, superior peduncle of cerebellum*).—In connection with previous lectures,[1] chiefly in those which treated of the corpus striatum and the optic thalamus, the relation of the cerebellum with the medullary portion of the cerebrum by means of special fibres has been mentioned. The special group of fibres which compose the processus cerebelli ad cerebrum appear to start anteriorly from among the radiating fibres of the cerebrum and are forced apart, in the region of the crus, above the corpora quadrigemina, by the introduction of a nodal mass of gray matter, characterized by nerve-cells and granular material, the so-called "red nucleus of the tegmentum." In the region of the lower half of the superior corpus bigeminum this tract appears as a simple bundle of fibres, which are not destitute of nerve-cells but whose circumference is much less than in the region of the red nucleus. The nerve-cells of this bundle are of extreme size, and appear to be arranged parallel with the *vessels* of that region rather than with the nerve-fibres. In some cases they bend to fit the angles of the branches of the arteries, and send out long prolongations that run longitudinally along, and probably in their walls (Meynert). Even in the "red nucleus," this arrangement may be demonstrated. The presence of nerve-cells within this tract does not cease until after its decussation and its escape from the corpus quadrigeminum. It yet remains to be demonstrated whether the crural portion of the processus cerebelli ad cerebrum is the only seat of a peripheral termination of nerve-cell processes in the walls of capillaries in the midst of the central organ.

If successive cross sections of the region occupied by this tract be studied, it will be seen that the processus cerebelli ad cerebrum of either side approaches the median line and that the fibres eventually decussate. The region occupied by these decussating fibres lies between the "posterior longitudinal fasciculus" and the "stratum lemnisci," the remaining bundles of spinal fibres which enter the tegmentum having been crowded away by them. After their decussation, these fibres pass outward until they reach the inner surface of the inferior lamina of the lemniscus, which forms a sort of protective cover for them. Meynert has compared the outline of the two processes to the form of a horse-shoe, whose opening is directed backward. This opening represents an area which embraces those fibres of the "tegmentum cruris" destined for the spinal cord lying between the stratum lemnisci and the posterior longitudinal fasciculus. The decussating fibres of the cerebellar tract force their way among the fibres of the tegmentum cruris to reach their lateral position; hence, cross sections made at different altitudes show ever-varying relations between these fibres and those of the tegmentum. Stilling and Arnold, who have made a special study of the course of the fibres of the processus cerebelli ad cerebrum, differ as to the completeness of the decussation, the latter denying that all the fibres cross the median line. Meynert confirms the view, originally advanced by Stilling, that the decussation is complete.

After the decussation of its fibres, each processus disengages itself, both superiorly and externally, from the fibres of the tegmentum cruris in which it was embedded. Opposite to the point of greatest convexity of the pons Varolii, it becomes uncovered by the inferior lamina of the lemniscus. Later in its course it becomes buried in the white substance of the cerebellum, and finds an ultimate connection with the "nucleus dentatus," the central mass of gray matter within the cerebellar hemisphere.

(To be continued.)

[1] Published in the Journal of Nervous and Mental Diseases, February and April, 1883.

NOTES ON GYNECOLOGICAL THERAPEUTICS.

By HORATIO R. BIGELOW, M.D.,
WASHINGTON, D. C.

Constipation.—Women seem to be especially subject to intestinal torpidity. Their sedentary lives, and the manifold disturbances of the uterus, or of the uterine adnexa, which are of very common occurrence among them, seem to be conducive to irregularity. Carelessness, too, in observing fixed hours, the necessary prerequisite to the formation of a habit which impresses itself upon normal peristalsis, is not infrequent. Many instances of obstinate constipation of long standing have yielded to simple rules of observance. A woman should be taught to go to the water-closet at a stated hour each morning, and wait patiently, without undue straining or nervous agitation, the consummation of her desire. This routine, faithfully carried out, fixes itself upon the intestinal function, so that the bowels become accustomed to a daily movement at a definite hour. But there are cases, especially in women with retroverted, prolapsed, or enlarged uteri, in which there is always a residuum left just above the internal sphincter. There is inability to expel it, either because the fundus uteri pressing upon the rectum, occludes the normal lumen—expulsive efforts causing a high degree of pain in the womb, and increasing the amount of prolapse, which obtains in all conditions of retroversion to a certain extent—or else from loss of tone in the lower bowel itself. Many patients of regular habits frequently complain of this unsatisfied desire. The wearing of pessaries or of cotton tampons will occasionally bring about such a result. To overcome this, to insure a satisfactory movement which shall cause no uterine inflammation, which shall empty the rectum entirely, and which shall counteract the astringent properties of iron tonics, has been a favorite field of investigation. Impacted fæces, from an insufficiently emptied rectum, will act as a foreign body, and give rise to much constitutional disturbance. I have lately been in the habit of using, and with complete satisfaction, a very domestic remedy, which I venture to give the profession: One-half pound of figs, one ounce pulverized senna, one ounce pulverized sulphur. Chop the figs up as fine as possible, then add the senna and sulphur, and two tablespoonfuls of granulated sugar. Knead as one would dough, and moisten with a little essence of vanilla. Roll out and cut into thin pieces the size of a quarter of a dollar. Take one-half of one of these tablets, or even a whole one if necessary, as occasion may require. This will bring about a natural movement without strain or pain of any kind. It creates no uterine irritation and does not force the uterus low down into the pelvic cavity as many such preparations are apt to do. If the liver be implicated, I have had good results from parvules of podophyllin, as made by Warner of Philadelphia, given at short intervals.

Malt.—Hoff's malt, taken after meals, is a good tonic, but not, strictly speaking, a digestive. It acts admirably in the marasmus of uterine affections, where the object is to build up the system with wholesome nourishing food. But there is a certain class of cases in which dyspepsia is not only a prominent, but an aggravated and pertinacious symptom—a dyspepsia that is purely reflex, not due to any primary derangement of the stomach, liver, or bowels, and which gets better only as its exciting cause improves. I have used many preparations of malt with varying results. A convenient test is to place in a test-tube a given amount of starch, then add a teaspoonful of malt, and notice the time which elapses be-

fore the starch is entirely digested. Then add a few drops of iodine, and if the characteristic reaction takes place, we may be sure that there is something lacking in the malt, otherwise we would have no purple or blue color. Saliva, too, is related to the digestion of starch, just as the pancreatic juice emulsifies fats, and the gastric juice digests proteids. As contradistinguished from Fothergill's assertion that malt extracts act better in the presence of an alkali, it is a fact that their greatest diastolic power is in the presence of acids. To preserve them from deterioration glycerine is used in large quantities. Reed & Carnrick's maltine, when it first made its bow to the public, seemed to meet all demands. But latterly, whether owing to a larger amount of heat being used in its preparation, so as to avoid the use of so much glycerine, which costs about one hundred dollars per barrel, or to some other cause to me unknown, it has fallen below the standard, having little or no power over starch. Loefland's malt, an expensive imported preparation, is much more active, but does not entirely digest the starch in the test-tube. Trommer's malt digests the starch rapidly and gives no reaction whatever to the iodine test. This latter, therefore, I have used latterly, and have always found that it accomplished what I desired. This test, together with microscopic examination, were made and verified by one of our ablest chemists and microscopists in Washington. Now I do not pretend to say that an extract of malt is indicated in all cases, but I do believe that much disappointment has arisen from the employment of an inferior article, which has nothing to commend it but a flaming advertisement. There are patients who grow much better under the judicious employment of malt, and there are others who receive no benefit whatever from any preparation. If the dyspepsia be intercurrent with a generally weakened constitution, so that all the functions are tardily carried on, the elixir of iron, quinine, and strychnia will be found to subserve an admirable purpose. If it be due to the excitability of the stomach, which occurs after frequent vomiting, such as occurs in the intra-menstrual period and is due to hydro- or pyosalpinx, or to a subacute inflammation of the peritoneum, or to an ovaritis, small quantities of milk and lime-water, frequently administered, followed by finely minced raw beef, will be indicated. A cup of *hot* water will frequently allay the nausea, pain, and craving for food. Of course such suggestions as will come to the mind of every intelligent practitioner in regard to food should be urged with force. A weakened stomach is sure to rebel against a dose of hot bread or highly seasoned fatty food. I am of the opinion that such women should take their most substantial meal at midday, and be satisfied with a light supper.

I wish to call especial attention to the Carlsbad Sprudel Salt (either the new salt, or the Eisenquelle, or Karlsbad, or the Giesshübler Sauerbrunn) in the treatment of dyspeptic women with yellow eyes, sallow skins, and a general torpidity of the liver and intestines. A heaping teaspoonful in a half-tumbler of warm water, gives an easy action, promotes the flow of bile, and permits the digestion of suitable food. Dr. Hlawacĕk says of them that coming into contact with the mucous membrane of the intestinal canal, they act: (1) As animating, modifying, and soothing the nerves of the part; (2) as healing with regard to the mucous membrane of the ventricle and duodenum; (3) as removing acidity; (4) as purging. By being absorbed into the system they dissolve: 1, The tenacious and thick bile contained in the biliary ducts, and are even capable of dissolving gall-stones in course of formation; 2, they remove congestion of the blood generally, but chiefly of the mesenteric vein; 3, they disperse accumulated lymph; 4, remove fatty tumors due to fibrous inflammatory products; 5, they improve and ameliorate the condition of the blood and lymph, chiefly when it shows itself by an accumulation of albuminous azotic compounds. They give dark bilious motions, thus freeing the system from the superfluous accumulation of the compounds of carbon and hydrogen. Nothing equals them in "plethora abdominis." The Schlossbrunn and the Marktbrunn are cold waters, and are the ones upon which patients usually begin. The Sprudel salts, however, are most in vogue in this country. Their action is not purgative in the strict meaning of the word, and their use need not be discontinued during menstruation. The Sprudel salt contains in 100 parts: Sulphate of soda, 37.69: chloride of sodium, 0.39; carbonate of soda, 5.99; traces of sulphate of potash, and 55.52 parts of water. One or two teaspoonfuls may be added to the imported Karlsbad, Selters, or soda-water. The Eisenquelle is a chalybeate water, and should be mixed with one-third of Giesshübler-Sauerbrunn to prevent cardialgic pain.

The *left side pain*, so common among many women, may be due to the dragging on the pleuro-colic ligament, attributable to an overloaded colon, in which event the remedy is plain.

Hot water vaginal douche is of pre-eminent value. In ovaritis, lymph-adenitis, inflammations, and in nearly all the diseases of the uterus and its appendages, nothing will be more grateful. For this purpose I make use of Merriam's arrangement. It is less fatiguing to the patient than the fountain syringe, while the reservoir holds more water, runs out slower, and can be kept at an even temperature. The pelvis being elevated, the water reaches every part of the vaginal envelope, which it cannot do with the ordinary method. Its value may not be overestimated.

Electricity.—I have used galvanism, from eight to fourteen cells, with a current interrupted six times per second, in some cases of ovaritis and salpingitis, with marked benefit. Dr. Mundé used it with an electrode in the rectum and a large sponge over the lower abdomen, with some success, in a case of lymph-adenitis. In cases of spasmodic (reflex) contraction of the gall-duct, due to ovarian trouble, giving rise to symptoms of catarrhal jaundice, it has also stood me in good stead. In all instances of lymph formation and exudation it is of great value. The localized and general faradic current is of common use in neurasthenia.

Pessaries.—There are some reasons which almost lead me to believe that pessaries are an abomination. The resultant ease and comfort may be followed by after-suffering, and is continuous only with the wearing of the support. No permanent cure is brought about; the vaginal walls are put upon a stretch, so that they lose their contractility, and can never be relied upon for any natural support to the uterus; the bladder and rectum are both intolerant of the pressure, and the superimposed uterus suffers at the fundus in a large proportion of cases. In retroversion I have found scores of women who complained of rectal tenesmus and pain, irritation at the neck of the bladder, and of a sore spot at the fundus, who were wearing a most carefully adjusted pessary made from exact measurement. In anteflexion they accomplish absolutely nothing. The whole principle is wrong. Gehrung's pessary is the best I have used in these cases, but it does not cure the flexion. Some women, especially those with lymph-adenitis (see Mundé's article, *American Journal of Obstetrics*, October, 1883), can wear no support whatever. So far as I possibly can I rely upon pneumatic pressure, replacement, and astringent tampons. In other cases I use the pessary for want of something better, but always with fear and trembling. I never use the stem, for I cannot see how it will cure a flexion, and the attendant risk is great.

Iodoform.—Useful in quieting nausea, and as suppository in ovaritis and inflammation of the uterus. Also of service in lymph-adenitis. Of this latter I know nothing from experience. I have never diagnosed a case, and am indebted to Dr. Mundé's article for pretty much all that I know about it. As a quieting lotion I use a preparation introduced by Dr. Currier, of iodoform, eucal. glob. (fl. ext.), and glycerine. Iodoform is a valuable alterative, and useful as a topical application in eroded or ulcerated surfaces.

CHLOROFORM NARCOSIS DURING SLEEP.

By JOHN H. GIRDNER, M.D.,

NEW YORK.

In The Record of April 28, 1883, I published an account of a number—five—of unsuccessful attempts to anæsthetize persons while asleep, without awakening them, by impregnating the inspired air with the vapor of chloroform. I wish now to add to this record eighteen other experiments made by myself, with the kind assistance of Dr. Norris, of this city, House Surgeon to Bellevue Hospital. The date was the night of September 19, 1883.

I.—Boy, aged seven. A small hand-towel, moistened with chloroform, held about twelve inches from the face and slowly brought nearer; at the end of one minute, and when the towel was within about six inches of the face, the boy awoke with a start, and looked around in a frightened manner.

II.—Boy, aged ten. Towel held two feet away, carefully brought nearer; woke in three and one-half minutes with a start.

III.—Boy, aged ten. Towel twelve inches; awoke immediately.

IV.—Boy, aged eleven. Towel twelve inches; awoke immediately.

V.—Boy, aged eight. Towel twelve inches; woke in fraction of a minute.

VI.—Woman, aged thirty-three. Towel held eighteen inches from face; awoke in one minute.

VII.—Woman, aged thirty. Towel eighteen inches from face; awoke in one and one-half minute.

VIII.—Boy, aged two. Towel held two feet from face and slowly brought nearer; awoke at end of three and one-half minutes.

IX.—Man, aged fifty. Towel held three feet from face and very slowly brought nearer. At the end of seven and one-half minutes he showed signs of restlessness, turning in bed and moaning in his sleep, and awoke frightened.

X.—Man, aged twenty. Towel eighteen inches from face; awoke in about three minutes.

XI.—Man, aged twenty-five. Towel twelve inches; awoke in about three minutes.

XII.—Man, aged seventy. Towel two feet; awoke in four minutes.

XIII.—Man, aged twenty-eight. Towel eighteen inches; awoke immediately.

XIV.—Man, aged sixty-two. Towel eighteen inches; awoke in about three and one-half minutes.

XV.—Man, aged twenty-five. Towel two feet; awoke in about three and one-half minutes.

XVI.—Man, aged sixty-four. Towel two feet; awoke in four minutes.

XVII—Man, aged twenty-six. Towel two feet; awoke immediately.

XVIII.—Man, aged twenty-four. Towel two feet; awoke in three minutes.

Dr. Norris tells me that he has made three other unsuccessful attempts to narcotize children with chloroform while asleep without their awakening.

Since writing my former paper I have received a large number of communications on this subject, both oral and written, from medical gentlemen throughout the country, including many of the oldest and most distinguished surgeons, and in every instance their experience has been identical with my own. Since I last wrote there has also been a number of letters published in this and other journals detailing what at first sight might seem to be successful attempts to transfer persons from natural to chloroform narcosis without an interval of consciousness. Some of these letters have also criticised my experiments, and placed me in a false position. I can but think, however, that this latter mistake was due to superficial reading of my paper.

One gentleman says, speaking of my paper: "In which he takes the ground that chloroform narcosis during sleep is impossible." I need not tell any one who reads my paper carefully that there is nothing in it to warrant such an assertion. I was unbiassed at that time, and was, and still am, as anxious to know the truth as any one. Of the dozen or so of cases reported since I last wrote, in which it was claimed that persons had been chloroformed while asleep, I must say they are all unreliable, for the reason that not one of these reports contains conclusive evidence that the patient was ever transferred from the unconsciousness of natural sleep to that produced by breathing chloroform. As a rule, the subjects were children on whom it was desired to perform some slight operation, as the removal of a bean from the nose, cutting off the foreskin, etc., the latter being the most important operation performed on these supposed-to-be chloroformed children. Now, every surgeon who has had much experience knows that such operations as these can be performed on children during natural sleep without their awakening. I have opened a large abscess of the thigh in a small boy, requiring a cut one inch long and half an inch deep, while he slept, without his waking. Dr. Linengood, of Bellevue Hospital, reduced the fragments and applied the proper splints to a fractured forearm of a child, one year old, while it slept in its mother's arms; and Dr. Cunard, of the same institution, amputated a crushed finger for a child and dressed the stump without waking it from a sound sleep; and I have seen a man with half the flesh eaten from one great toe by hungry rats while he slept after a hard day's work in an empty tumble-down house. Thus it is plain that the evidence brought forward by the gentlemen who have reported these cases to prove that their patients were anæsthetized, is not evidence at all. It was possible to have performed all these operations without ever having held a cloth moistened with chloroform near the faces of these sleeping children.

The symptoms of anæsthesia, or narcosis from chloroform, are so well marked, and generally so well understood, that it seems useless to repeat them here. Complete muscular relaxation throughout the body, and the consequent stertorous breathing, the loss of reflex action, as shown, for instance in the failure of the eye to close when the eyeball is touched with the finger, etc., etc., are the symptoms; and when I know they have been produced by chloroform inhalation in a sleeping person without that person being aroused to consciousness, then I will believe that chloroform narcosis during sleep is possible.

Hysterical Pseudo-Phthisis.—In young women suffering from chlorosis and hysteria there is often, according to Dr. Fabre (*Centralblatt für Gynäkologie*, September 8, 1883), a condition simulating phthisis. There is a cough, with expectoration, and even spitting of blood. Physical examination reveals dulness at the apex (usually on the right side), feeble respiration, and occasional râles. The author regards these symptoms as due to a vaso-motor disturbance exciting a pulmonary congestion. Other organs may also be subject to functional disturbances. Obstinate anorexia, gastric pain, occasionally diarrhœa, but more frequently constipation, are not seldom present. The pulse is weak and frequent, like that of fever, although the temperature may be normal. Sometimes, however, there is elevated temperature, but it is only transitory, and regular evening exacerbations are never observed. The expectoration is not purulent, but may be mixed with blood. While in true phthisis there is emaciation, in these cases the patients often increase in weight. Sweating, as a rule, is not met with. The differential diagnosis is often difficult, and the author relates that cases have not infrequently occurred in which a diagnosis of pulmonary consumption was made, but the patient nevertheless recovered. The condition may exist without material improvement for months, or even years.

OXYGEN AND SOME OF ITS COMPOUNDS AS THERAPEUTIC AGENTS.[1]

By SAMUEL S. WALLIAN, A.M., M.D.,

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PRIESTLEY, who divides the honor of its discovery with Scheele, was the earliest experimenter with oxygen as a physiological agent. He demonstrated that birds, dogs, rabbits, and other animals immersed in an atmosphere of this gas became more lively, active, and brilliant; that dogs trained for the chase could endure greater hardships, and for a longer period, when allowed to breathe the gas for a short time previous to the start than similar animals not thus prepared; and that animals asphyxiated by being compelled to inhale carbon dioxide or other noxious gases were speedily resuscitated if treated immediately with pure oxygen.

Lavoisier confirmed these results, and further demonstrated that the muscles of animals repeatedly subjected to the influence of the gas became very firm, decidedly interfering with their tenderness if speedily designed for the shambles!

These results attracted some attention, and were followed by considerable experimentation on the part of pathologists and physiologists.

Among these early investigators, Dr. Beddoes—not "Eddoes" as quoted in the London *Lancet*—was the first medical man of repute who gave the subject any serious attention. He was assisted by some of the most eminent scientists of his day, including Sir Humphry Davy. These original experimenters labored under serious disadvantages, particularly that of evolving the gas in suitable quantities and of sufficiently pure quality for medical use. After many trials and numerous failures, with not a few accidents, Beddoes declared himself beaten, not by his own loss of faith in the potency of the new remedy, but "by the difficulty of making it available." He did not escape the usual storm of ridicule which invariably greets an innovation, especially if the latter falls short of an immediate and pronounced success. However, his partial success inspired other efforts in the same direction, and he was followed by Drs. Hill, Thornton, Cavallo, and others. Over-sensitive to unkind professional criticism, the latter conducted their experiments in comparative seclusion.

In 1820 Dr. Hill published a brochure reporting the results of these efforts, which, although full of instructive facts and suggestions, attracted little attention, and members of the profession at the present day would be surprised to know that experiments so conclusive were so long since attempted, or that a work of such unusual professional candor was ever issued.

Thornton, Cavallo, and McCormack followed, somewhat later, with still more searching and extensive trials of the gas, and each unequivocally asserted that it would eventually be found a potent and valuable therapeutic agent. They failed to awaken much interest in the subject, and met with the customary storm of ridicule and unreasoning opposition.

Within the last quarter of a century, although little has been said on the subject, various men of note in the profession, including Goolden, Birch, Alexander, Erichsen, Richardson, Demarquay, and others have more or less investigated, occasionally used, and without exception admitted the potency of oxygen in the treatment of disease.

In this country but casual attention has been given to the subject, and beyond an occasional exhibition in some extreme case in hospital practice, little has been reported, the opinion still obtaining with those who have considered the subject at all, that the use of non-atmospheric oxygen in the treatment of disease is of doubtful utility, if not positively dangerous.

Literature on the subject is meagre and unsatisfactory. Little has appeared in this country, and, as yet, no American publisher has ventured the reproduction of such fragmentary foreign works as have occasionally appeared.

In an article ("Super-Oxygenation as a Therapeutic Measure") in the *Chicago Medical Journal*, vol. xxvi. (1869), pp. 116–120 and 139–152, I gave the results of some of my earlier experience with various super-oxidizing agents.

As a rule, the medical press, both at home and abroad, has shown very little interest in the subject, evidently acquiescing in the prevailing verdict—the only marked exceptions being the London *Lancet* and the *British and Foreign Medico-Chirurgical Review*, in both of which interesting articles have occasionally appeared.

Demarquay's reports to the Academy of Medicine (Paris, 1866)[1] were considered conclusive and satisfactory as far as the subject was covered by his experiments; but have never been reproduced for American readers.

In 1856 appeared in London a small volume under the extremely classical title of "Pneuma-Therapeia." Its author, who was presumed to be McCormack, withheld his name, probably for prudential reasons, since its arguments and reports of cases were addressed more to the public than to the profession; and in an appendix, the Medical Pneumatic Apparatus Company, with the address "46 Regent Circus, Piccadilly, London," advertised to supply both oxygen and the necessary apparatus for manufacturing and administering it.

This little anonymous volume repeated some of Hill's reports of cases treated, including *scrofula*, *dyspepsia*, *chronic dysentery*, *asthma*, *dyspnœa*, and *asphyxia;* also referring to the experiments of Beddoes, Davy, Weeks, Cavendish, Coleman, Goodwin, Menzies, Liebig, and others.

Dr. S. B. Birch, of the Manchester Medical School, issued a monograph on the subject of oxygen as a curative agent ("On Oxygen," London, 1857), but it met with very ungenerous criticism and did not find its way to this side. A second edition (London, 1858) was the first contribution to the literature of the subject which commanded any degree of attention.

Ten years later, already investigating the subject of oxygen compounds, I procured a copy of Birch, and am indebted to him for valuable suggestions.

This author says (*op. cit.*, p. 148):

"It (oxygen artificially prepared) is a powerful, really scientific, and agreeable curative agent; is capable of far more extensive range in its application to the rational treatment of chronic disease than, perhaps, any other remedy—*is pre-eminently Nature's own therapeutic*, affording assistance in her own way without opposing the intentions of her ever-present *vis medicatrix*, and is entitled to the position of a *curative* in a variety of intractable diseases, otherwise incurable by any other known means, or tacitly acknowledged to be so; . . . . is occasionally *the* remedy, and then the only one worthy of the name, in certain contingencies where life must be (and frequently is) sacrificed by neglecting a fair trial of it."

He adds: "It may with safety be predicted that, sooner or latter, non-atmospheric oxygen will be universally admitted as one of our most valued remedial agents" (*op. cit.*, p. 149).

The verification of this rather sanguine prediction has not yet transpired. Whether on account of the serious and hitherto insuperable difficulties of making the treatment generally available in private practice, or from lack of professional enterprise and ingenuity remains to be investigated.

With the general profession a sort of chronic impression prevails, based on neither science nor experience, that the therapeutic use of non-atmospheric oxygen has been tried and failed?

[1] Read before the Franklin County (N. Y.) Medical Society, June 5, 1883.

[1] See also Gazette Médicale, Paris, 1866.

Professor Da Costa says: "Of all the gases oxygen is now being most tried, particularly for the relief of dyspnœa and in low fevers, or during convalescence from low fevers, and in chlorosis. We must await these new trials, for the former experiments were unsatisfactory. But excellent results have quite lately been claimed for oxygen inhalations by Demarquay—who is at present investigating the subject—not only in the conditions named, but in diabetes, in senile gangrene, and in prolonged suppuration" ("On Inhalations," Philadelphia, 1867).

In this country, very little has been heard from these later investigations, except in connection with the subject of antisepsis. In fact, the past decade, in the history of medicine may not inaptly be termed *the age of the germ-craze*. The microscope has monopolized the laboratory, and wellnigh superseded the inductive method. Morbid products have been accorded more prominent attention than vital processes; results studied with the most elaborate minuteness, to the exclusion or ignoring of their underlying causes.

There is no doubt, however, that the shortcomings of impure and carelessly manufactured gas have done more than all else to bring the use of oxygen and its congeners into disregard, if not discredit, and to prevent its timely use by the profession at large.

Again, the usual methods of generating it in a sufficiently pure form for medical use are a conspicuous drawback to its general use by even those who are aware of its value and anxious to avail themselves of it. Some apparatus is required, and careful chemical manipulation, which in time, no doubt, will be delegated to the pharmacist and manufacturing chemist.

At present the process by means of chlorate of potassa and manganese dioxide is the most practical and economical for ordinary purposes. The apparatus required is neither complicated nor expensive. Some care is requisite, but the gas afforded can be secured in a state of almost absolute purity. Various inventors and manufacturers of surgical instruments have, from time to time, brought out unique and ingenious contrivances for evolving and administering the gases, of which might be mentioned one by Dr. Biegel, and that of Galante, of Paris. The Pneumatic Medicine Company, and also Barth, of London, condensed the gas in iron flasks, and added devices for its convenient dispensation.

Fleitmann proposed a process for the rapid liberation of oxygen in a tolerable state of purity (which in a medical sense is nothing short of *in*tolerable) by means of calcium chloride and monoxide of cobalt. Since it required that the chloride should be in a state of saturated solution previous to the addition of the cobalt, it was unwieldly and never became popular.

Improving on this suggestion the Messrs. Robbins & Co., of London, succeeded in combining the two substances in the form of dry powder, which is ready for instant use on the addition of simple boiling water, and, it is said, may be preserved indefinitely without deterioration. The process of combining the two substances is reserved by this firm as a manufacturing secret.

An intimate ally of oxygen, therapeutically speaking, is found in *nitrogen monoxide*, N_2O—the "nitrous oxide" of the old nomenclature. It is almost as potent an oxidizing agent as oxygen itself. It supports combustion nearly as well; its specific gravity is greater, and it is distinguished from oxygen by its much greater solubility in water. Doubtless, from this cause, it is much more rapidly and extensively absorbed into the system when inhaled.

It is best known through its general use as a dental anæsthetic. When perfectly pure—a rarer circumstance than need be—it may be inhaled for some time with impunity; in fact it may be safely assumed that the rational use of the pure gas is practically, if not absolutely, free from danger, since out of the millions of instances of its exhibition to patients of all ages and conditions, the very few fatal cases reported were quite probably attributable to impure gas, irrational or ill-timed administration, or accidental causes.

The anæsthesia induced by its free inhalation, quite unlike that from chloroform, ether, ethyl, bromide, and other anæsthetics, is transient, pleasurable, unaccompanied by a stage of excitation, and is not followed by depression or other unpleasant after-effects.

Under a pressure of fifty atmospheres, it becomes liquid, and at — 120° F., Faraday succeeded in reducing it to a solid. In the latter form, applied to the skin, it produces a painful, burn-like blister (Fownes).

That it is an oxidizing agent in a marked degree, and that its therapeutic value is not limited to its use as an anæsthetic, is evident from its chemical and physical characteristics. At the same time it combines properties so different from those of oxygen, that the two are by no means therapeutically identical.

Several small volumes have been devoted to this gas, all but one of them, so far as I am informed, limited to a study of its claims as an anæsthetic.

In 1860 Dr. George J. Ziegler, of Philadelphia, issued a little volume, now out of print, in which he claimed much for this gas in the treatment of several forms of chronic disease. Experimenting somewhat extensively, his success led him to assert emphatically that, if properly exhibited in suitable cases, it would be found not only a *materia medica* but also a valuable *materia alimentaria*. Classing its anæsthetic and antispasmodic properties as secondary, he insisted that it served as a *direct source of supply to the blood and tissues*.

Later, some enterprising but unscrupulous pretenders "discovered" in this gas the so-called "oxygenized air," which a dozen years ago was extensively advertised as a cure-all. "Rights" to manufacture and administer it (!) were sold to gullables for a round sum, the process of generating it being bunglingly disguised by the addition of ferric carbonate or other inert coloring material to the ammonium nitrate used. Even to this day a firm in Philadelphia is still harping on the miraculous alchemy of "compound oxygen." What their office remedy may be I do not know; but the trash they send to their mail correspondents, calling it "home treatment," is a barefaced swindle and utterly worthless, being nothing more than a weak solution of the nitrates of lead and ammonium, or of ammonium muriate and St. Croix rum.

The process for evolving nitrogen monoxide is simple and well known to every tyro in chemistry. The gas should be washed through not less than four waters (wash-bottles)—half a dozen would be still better—before it is fit for inhalation.

The *peroxide of hydrogen*, HO_2, was discovered by Thenard in 1818, but has not until quite recently attracted any attention as a physiological agent. Assmuth and Schmidt made some unsatisfactory experiments with it in 1864. Richardson soon after used a solution of it in water, and approved it for internal administration. Its very unstable nature and disagreeable flavor, however, prevented any degree of popularity, and not until 1878 were any satisfactory experiments conducted. In that year Gutmann and Schwerin demonstrated that it underwent decomposition in the tissues, liberating free oxygen in quantity sufficient, when pushed, to induce gaseous pulmonary embolisms, with arrested capillary circulation, and finally fatal results.

About the same time Stöhr, experimenting with it as a disinfectant, employed it extensively in cases of phagedænic and syphilitic ulcers and diphtheria. According to this author the pus from venereal ulcers lost its virus after two hours contact with a concentrated solution of peroxide of hydrogen. The discharge from ulcers treated with it quickly assumed a more benign character, healthy granulations appeared, and losses of substance were rapidly repaired.

More recently MM. Péan and Baldy have given this agent quite extended trial in the surgical wards of the Hôpital St. Louis (Paris), as a substitute for carbolic acid in antiseptic dressings. Under its use the general sanitary condition of the wards notably improved, cases of traumatic fever and erysipelas became less frequent, and it was found especially desirable as an application in dressing flaps, after amputations, union by first intention being decidedly encouraged by it. As compared with carbolic acid and other antiseptics it possessed the manifest advantage of being devoid of both unpleasant odor and toxic influence, while its application was painless, if not even agreeable.

Following in the wake of these promising and suggestive tests, Dr. Landolt found its use in ophthalmic surgery to be a great advance over that of any known antiseptic, since it can be used of a strength sufficient to effectually destroy all forms of microzoa without injury to the delicate structures to which it is applied in ocular surgery, which is not true of carbolic acid, alcohol, salicylic acid, etc. He also found it to be possessed of very remarkable detergent properties, promptly cleansing suppurating surfaces, arresting septic fermentation, and rapidly checking suppuration in even neglected cases of gonorrhœal ophthalmia.

For more extended details of Dr. Landolt's interesting experience, see the London *Medical Record*, for March, 1883.

At this point, some inquiry as to the *modus operandi* of super-oxidizing agents and the final disposition of the quantity of oxygen daily consumed or *appropriated* in the human system will not be out of place.

A healthy adult, at active exercise in the open air, inspires daily one thousand gallons of oxygen, diluted with four thousand gallons of nitrogen.

Regnault and Rieset have shown that the decarbonization of the blood is one of the minor offices of the oxygen inspired. Of the one thousand gallons daily required, from ten to twenty-five per cent.—one hundred to two hundred and fifty gallons—*is absorbed, directly and in a free state, into the blood* (Magnus).

The marked affinity of the blood for oxygen is indicated by the physical fact that the former readily absorbs two and one-half times as much of the latter as water at the same temperature.

Nor is it true that the carbon dioxide exhaled during animal respiration is wholly formed in the lungs. It already exists in the venous blood before it reaches the lungs, while both carbon dioxide and free oxygen exist in arterial blood (Dalton).

Magnus found the proportion of free oxygen to carbonic acid by volume in arterial blood was as 10 to 25; in venous blood as 10 to 40.

Thus in the pulmonary circulation carbon dioxide is given off and oxygen absorbed, while in the general circulation the oxygen gradually disappears, and is replaced in the venous blood by carbon dioxide. The free oxygen in the general circulation exists there in the form of a simple solution. It is finally absorbed from the blood of the capillary vessels, and *becomes fixed in the substance of the vascular tissues.* The blood is therefore a circulating fluid destined to transport oxygen from the lungs to the tissues, *for it is the tissues themselves which finally appropriate the oxygen and fix it in their substance* (Dalton).

Burdon-Sanderson has further shown that the red blood-cells are the main carriers of oxygen, and that the condition of inflammation, in its earlier stages, essentially consists in a sluggish and finally immobile condition of the white blood-cells, from want of a due and regular supply of oxygen; and that the activity of the white blood-cells is in exact proportion to the amount of oxygen present. This would seem effectually to refute the prevailing impression that an over-supply of oxygen to any part necessarily induces an inflammatory condition.

The principal source of the carbon dioxide of the blood is the decomposition of the tissues, an essential part of their constant metamorphosis. The experiments of Marchand prove that *even here it is not a process of direct union of oxygen with the carbon of the tissues, but in some other and more indirect mode.*

Further evidence that oxygen and its congeners are important elements in every stage of the process of tissue-building, that oxygen itself is an element *in quo multum alimenti est*, is scarcely necessary. It is evident, however, contrary to the generally accepted ideas, that oxygen should be classed as a *restorative* rather than a *destructive*, and as *contributing directly toward constructive rather than destructive metamorphosis.*

Instead of constantly breaking down tissue by true chemical oxidation, as is almost universally taught and unthinkingly accepted, it really replenishes wasted tissue, both by supplying in itself an essential element toward such repair, and by stimulating and correcting, at every step, the assimilative process.

On the other hand, admitting that the stereotyped assumptions in physiology are true, the rate of metamorphosis is held to be the gauge of vitality. Imperfect or impeded metamorphosis is disease, arrested metamorphosis is death.

In many of our therapeutic efforts of late are we not too eager to hasten *con*structive transformation, almost forgetting that this process must in all cases be both preceded and accompanied by *de*structive action! And do we not ignore the glaring fact that *no molecule of matter, whether of nerve or muscle-fibre, bone element, or blood-plasma, can be made to assume its position in the animal economy except through its direct association with this vital and inevitable element—oxygen!*

Throughout the organic world oxygen in some of its protean forms, is the universal basic element; the addition or elimination of a single equivalent often sufficing to transmute the blandest article of food into the most virulent poison, and *vice versa.*

(To be continued.)

A CASE OF INEBRIETY WITH CRIMINAL IMPULSES.

By T. D. CROTHERS, M.D.,
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The following case has a peculiar interest, not from its novelty, but as a type of a large class who are best known to criminal lawyers, and whose career is one progressive march of degeneration.

William B—— was placed under my care in 1881, as a periodical inebriate, who at this time was suffering from delusions and delirium in which he heard voices urging him to kill his wife and set fire to the house. He also felt a strong impulse to kill some one at times, particularly when recovering from the effects of spirits. He loved his wife and told her frankly of this state. If he went out in the street he seemed to hear the same voices telling him to do something startling that would create a sensation, and impulses to find an occasion to do so filled his mind. These impulses were pleasing and indulged in, although recognized as foolish vagaries of the brain. He would walk about for hours, living over in his mind scenes of great excitement, such as rescuing some great man from death by a runaway, or saving him from the cars, or from drowning, or a burning building. He would come home all exhausted and tell what he had thought, go to sleep, and hours after wake up with but a faint recollection of it. His parents were inebriates and neurotics, and died in early life. He was brought up by an uncle, and was educated as an inventor and machinist. He was temperate and intensely devoted to his work. Having made several profitable inventions, he became wealthy and married, living well in good surroundings. At thirty-five years of age he began to drink, from the loss of a child by drowning, the result of his carelessness.

Ten years after, from drink, he became a workman in the factory he had once owned. He used spirits to great excess, periodically, and the free interval became shorter steadily. The drink paroxysm came on without any intimation, and would not be realized until he had drank several glasses of spirits; then he would struggle against it, but to no purpose. Usually he would be walking the streets, after his work was over, with no thought of drinking, and only complaining of general exhaustion, when suddenly, without thought, he would enter a saloon and drink. When the spirits began to affect him he realized the danger for the first time. He never drank in company at the beginning. His mind remained about the same until the effect of alcohol passed away, when melancholy and hallucinations appeared. Not only his senses were disturbed, but his reason and judgment suffered, and he fully realized it in the remark "that it seemed like a thick cloud, full of deceptive voices and impulses that he was powerless to disobey, although he knew they were wrong."

The second or third day's removal from alcohol brought relief from these mental conditions, and later the memory of them grew fainter, and only remained as dim shadows of the past, his mind recovered its apparent force, and he seemed to be more anxious to be successful. He spent his leisure in reading and drawing models of new inventions, living very temperately in every respect. If some one should present the subject of temperance in private, or from the lecture stand in his hearing, he would be strangely agitated, and always drink within forty-eight hours. The same result would follow if he should try to help any one who was intoxicated.

A temperance revival in the neighborhood had the same effect of causing him to drink, although he was a shining example of those who were cured by grace. Three years before admittance, for the first time he had an impulse to place obstructions on the railroad, and thus witness an accident. From that time these impulses varied more or less, and from his own statements were often influenced by newspaper accounts of crime and deeds that created a sensation. If, while drinking, he should read of some great sensation, in which one man became very noted, he would revel in the thought, and even speculate how he could do the same. Later, these morbid fancies grew into homicidal impulses, which filled his mind with the greatest alarm, for which he sought every means to drive away. He drank to stupor for this purpose, and then when he recovered drank again as the only means for relief. His recovery under my care was rapid, and all these morbid states faded away. His mind was unusually clear about himself, and except a degree of nervous irritability, and a shrinking from personal contact with any one, he was not to any general observation different from others. Six weeks after admission he awoke one morning depressed, and soon after heard voices and felt impulses to burn up a neighboring church. Then they changed to a plot to blow up all the saloons in the city with dynamite at one time. He was fully aware of the nature of these thoughts, but it afforded him pleasure to go over the details and think of the results of this plot. The next day they faded away, and left but little impress on his mind. Four weeks later, after a period of some excitement concerning a business transaction, a similar plot filled his mind to destroy a drug store whose proprietor was not reputable. This was the last appearance of these morbid states, and after being under treatment eight months, he went away restored. Nearly two years after he was well and temperate, living in a country village, occupying a position of respectability.

These morbid states had not returned, he lived retired and avoided all excitement of every kind.

In all probability this recovery will be more or less permanent, depending on the surroundings and freedom from any great strain or drain.

This case was on the borderland of crime, and would positively have developed into a homicide or incendiary very soon. In court the only evidence in defence would be periodical inebriety, and possibly the purposeless or motiveless character of the crime. In the prosecution it would appear that the crime was premeditated and performed coolly, and beyond some transient excitement and muscular trembling there was no clear evidence of delirium tremens or alcoholic mania. The mind would appear to be clear, and his statements of voices and impulses to do the act would be considered a mere plea in defence. If the medical expert of criminal courts should be called on to examine the case, looking at his present state and comparing it with the general features of the crime, he would find nothing to indicate legal irresponsibility.

The result would be that all these cases would suffer the full measure of punishment, the practical effect of which is to make criminals and paupers of them ever after.

In this way our courts, from want of study and knowledge of the cases which are brought before them, are cultivating and developing the very conditions which they seek to prevent.

This case would be called alcoholic mania in the early stages, and very largely concealed, because the patient recognized its nature, and was ashamed to acknowledge its presence. These delusions and hallucinations were held in control by a very slender cord, which might break any moment, and pass off like a storm, leaving the mind comparatively free and clear, no matter what had occurred.

It is impossible to estimate the mental capacity of the person who commits crime following or during a paroxysm of drinking from a general study of the character of the crime. In this case the delusion or delirious conception to commit crime was known only to his wife. If he had killed her, no one could have corroborated his statement of a morbid impulse. The fact could only have been brought out by a careful study of his history.

In a case which had been sent repeatedly to jail for drunkenness and assault, it appeared that after a certain period of excess in the use of alcohol most positive delusions of persecutions appeared and readily attached themselves to any one who opposed him, that he assaulted any one on the slightest provocation, with all the characteristics of an insane man; yet the court, lawyers, and medical experts saw nothing but drunken fury, that punishment in jail could best relieve.

In another case an inebriate, after a certain point in the use of spirits, embarked on the most questionable business transaction, lost all consciousness of right and wrong, committed criminal acts of various kinds, was arrested, and the court considered only the nature of the acts, their evident premeditation, and the coolness with which they were committed, and fixed the punishment to the extreme limit of the law. In both of these cases, heredity, and a marked history of physical causation and progressive degeneration extending back for years was noted; but, as in most of the cases of this disorder, it was unknown, not studied, and concealed from general observation. These men had, to all appearance, a full knowledge and control of themselves, and yet they were literally waifs without power and ability to guide or direct their actions.

Alcohol seemed to suspend their self-control, and leave the disordered impulses subject to every wave of influence. Upon this point turns all questions of responsibility, not upon knowledge of right and wrong, and feeling, but upon power of control. This is the teaching of science, above all law, or decisions of courts. The inebriate, or man who uses alcohol to excess, has always a defective organization, either originating before alcohol was used or developed by this poison. In both cases states of physical and psychical degeneration exist, which make it impossible for the mental operations to be carried on normally.

In my studies many cases appear in which these strange, unaccountable criminal impulses are present that do not develop into crime. Why they do not is not known; but it is clear that all the conditions are present. The impulse and disposition, and the details of the act is lived over in the mind of the person, but its literal fulfilment is not consummated. I think future studies will show that these impulses are common, and refer to every state and condition of the mind and body. When they appear in kleptomania or pyromania, or any of the many crimes that are so often associated with inebriety, they are both pathological and psychological.

The methods of cure by legal means, to confine them in the worst mental and physical conditions, and then turn them out less able to become good citizens, less able to live a normal healthy life, is a disgrace to our civilization.

These cases are in our neighborhood and at our firesides, and mutely appeal to us for help.

They are victims of physical conditions which physicians only are competent to determine. Courts and moralists are incompetent; they must be studied by scientific men from a physical point; then much of the confusion of the present will clear away.

Progress of Medical Science.

A Young Ether Drinker.—A remarkable case of ether drinking is related in the *Gazette des Hôpitaux* of September 15, 1883. The patient when first seen by Dr. Sédan was but ten years of age. He was bright and intelligent, studied hard, and was one of the best scholars in his school. He confessed that he drank ether and said that it was by means of this that he was able to stand at the head of his class. Every means was tried to cure him of the habit, but in vain. He would steal money from his parents, and then go out at night to buy ether in the pharmacies. This was continued for nine years, the daily amounts of ether consumed rising gradually until he drank between one and two pints every day. He never experienced any ill effects beyond the intoxication, and death resulted finally from mitral disease, from which he had suffered for many years.

The Treatment of Abscesses of the Neck.—Dr. John A. Lidell, in a very instructive article on this subject in the number of *The American Journal of the Medical Sciences* for October, 1883, points out that sudden death may occur from deep-seated abscesses of the neck, or the continuance of life may be greatly endangered, much oftener than is generally supposed, and that these abscesses in the neck are more frequently attended with hemorrhages due to the opening of important blood-vessels by ulceration or erosion, and by *ramollissement* consequent upon the disorders themselves, than abscesses in the other surgical regions. The superior liability of cervical abscesses to the spontaneous occurrence of dangerous hemorrhages arises in part from the greater number and importance of the cervical blood-vessels; but more particularly from the inanition and exhaustion, or low state of the constitutional powers, and consequent feebleness of the reparative forces, which rapidly result from most of the deep abscesses of the neck, or rather from the inability to swallow enough food to support life, and from the powerlessness to get any refreshing sleep, or even repose, with which these abscesses are oftentimes attended. The septic or toxæmic influence of the fetid secretions and exudations which present themselves in the oral and faucial cavities in many instances, also aids materially to still further depress the patient, and weaken the reparative processes of his system. These deep-seated abscesses of the neck, when allowed to run their own course, do not exhibit any tendency to a spontaneous cure; but, on the contrary, they always tend to destroy life by burrowing or spreading, etc.; and Dr. Lidell shows that the earlier they are laid open and evacuated the better for both patient and surgeon. As soon as fluctuation is discerned, the abscess-cavity should, without delay, be freely laid open, the coagula turned out, the bleeding-point, or source of the hemorrhage, brought distinctly into view, and the delinquent vessel itself should be ligatured on each side of the aperture in its walls. But should the ligatures cut through, the actual cautery must be applied to the bleeding point, the primitive carotid artery should be firmly compressed against the cervical vertebræ by the surgeon's thumb or fingers applied on the anterior part of the corresponding side of the neck, between the larynx or trachea and the inner border of the sterno-cleido-mastoid muscle, with force enough to press the artery backward and inward against these vertebræ, and flatten it thereon. Should this procedure fail, it will be advisable, especially in cases where the bleeding proceeds from tonsillary abscesses, to ligature at once the primitive carotid artery.

Herpes of Malarial Origin.—The following are the conclusions arrived at by Drs. Verneuil and Merklen in a recent memoir: 1. Herpes is one of the frequent manifestations of the paludal poison. 2. The eruption may precede the onset of intermittent fever or occur during any one of the three stages of the attack. It may even show itself after the fever has been subdued by quinine. There is then no etiological correlation between herpes and fever, notwithstanding their frequent coincidence. This proposition is important, maintaining, as it does, that herpes is not a result of the high temperature, but is, like the fever itself, a result of a more general cause, viz., the malarial poison. Hence we find a new class of skin diseases, the *paludides*. 3. Malarial herpes presents no special characteristics. Its most usual seats are the borders of the lips, the edges of the nostrils, and other parts of the face most richly supplied with nerves. 4. The black crusts, or at least the black vesicles of herpes seem to belong to the pernicious forms of malarial fever. 5. In exceptional cases, paludal herpes shows itself in the form of zona. 6. In its most common forms, it may be preceded and accompanied by vaso-motor troubles and disturbances of sensibility of the skin about it. The cause of the eruption seems to reside in a nervous lesion, perhaps in a congestion of the cutaneous nerve-branches, resulting from a localization in these nerves of the paludal poison.—*Journal de Médicine de Bruxelles*, August, 1883.

The Prurigo Papule.—In the October number of *The American Journal of the Medical Sciences* for the current year, Dr. Morison, of Baltimore, considers that the prurigo papule is formed by an infiltration beginning around the upper layer of vessels of the corium, and that this infiltration extending upward surrounds the papillary vessels, enlarges the papillæ, thus pushing up the epidermis, which becomes thickened at an early stage above them, and at last penetrating it, forms within its layers a small vesicle containing serum, blood, and lymph-cells. The signs of infiltration surrounding the hair-sheaths and sweat-ducts are secondary, and they play no especial part in the process. Their presence in the papule is accidental, and it is certain that the primary changes in the skin are not in connection with them. The color of the papule at first does not differ from the rest of the surrounding skin, on account of the depth of the slight infiltration with which it begins. For the same reason, it is at first only felt, and not seen, as the infiltration has not extended high enough to push up the epidermis perceptibly, but is sufficiently great to give a feeling of knot-like hardness underneath it. He considers the whole process due to an inflammation, and that all the signs of chronic dermatitis follow regularly, according to the length and duration of the disease, and the amount of scratching, which the itching, as a secondary symptom, causes. Clinically the formation of the papule

coincides with this description, for there is always noticed in the beginning of the disease, after careful investigation of the skin, a slight roughness, and a sensation as of running the hand or finger over small knots, covered with an intervening membrane. At this stage there is no itching. In fact, the itching does not begin until the infiltration has so far advanced that the papules are more distinct. If before this occurs the treatment is begun, no itching appears. This proves, as Kaposi says, that all the symptoms of the disease go hand in hand with the increase or decrease of the papules.

SCOTT'S METHOD IN THE TREATMENT OF WHITE SWELLING.—A method of treatment of white swelling, advocated by John Scott in 1828, but afterward fallen into oblivion, was revived by Dr. Suchard, in 1879. The latter begins by rubbing the joint briskly with a sponge or coarse cloth dipped in spirits of camphor so as to produce rubefaction of the skin. Then the part is covered with lint spread with equal parts of mercurial ointment and soap cerate, over which adhesive plaster is applied in strips as for ulcers of the leg. Over all is molded a leather splint. The dressing is renewed every week or every fortnight, according to circumstances. Dr. Cazin has modified this dressing. He employs friction in the same way as Dr. Suchard, but in place of the mercurial ointment he uses vaseline thickly spread on cotton. Adhesive plaster is then strapped about the knee. Over this he lays another layer of cotton and then applies a silicate of soda bandage. The dressing is reapplied every two weeks. When the bandages are removed, the skin beneath is often the seat of an intense erythema. It is then necessary to wait a few days before reapplying the dressings. This treatment is said to have been followed by surprisingly good results.—*Journal de Médecine de Bruxelles*, August, 1883.

EXCISIONS OF THE TARSUS.—In cases of tarsal disease, amputation through the leg or at the ankle has been and still is regarded by surgeons generally as much to be preferred to any more conservative treatment. Dr. P. S. Conner, of Cincinnati, in the October issue of *The American Journal of the Medical Sciences* for the current year, has collected the reported cases of tarsal excision. The three questions he considers are: 1. Is excision a safe operation, or at least attended with no greater mortality than the alternative amputation? 2. Is it likely to put an end to the disease, or is recurrence of the morbid process in the unremoved bones of the foot to be expected? 3. Will the patient, after recovery from the operation, be left with a serviceable limb? As respects the preservation of life, he finds that excision of the whole tarsus, or of one of its great divisions, is not much, if any, more dangerous than an ankle-joint amputation, and not very much more so than a middle tarsal operation. It has, moreover, the advantage of permitting, if necessary, of the subsequent removal of the foot, which, in the cases tabulated, was performed seven times with but a single resulting death. That the disease is very unlikely to reappear is shown by the fact that in only three cases did such recurrence take place. This fact, however, is not so strange as it may at first seem, as it is in direct accordance with the recognized law that the more thorough the removal of diseased bone the less will be the likelihood of a relighting up of the bone inflammation. By far the most important question of the three proposed is that which has reference to the functional value of the saved foot. He holds that its usefulness is likely to be sufficiently great to warrant the taking of a somewhat increased risk or life, and in subjecting the patient to the necessarily much greater duration of the period of healing—a period that, though it may be as short as four weeks, may occupy more than twice as many months or even half as many years. Of the 108 operations tabulated by Dr. Conner, 10.18 per cent. resulted fatally. Of the 95 cases, the end-results of which are known, 10.53 per cent. were failures; 6.32 per cent. left the subjects of them able to walk with a cane or crutch; in 24.21 per cent. there was, after complete consolidation had taken place, no pain nor tenderness, little or no limp, and the individuals were not prevented by the condition of the foot from earning a livelihood; and in 47.37 per cent. the result was so good that the gait was not a bad one, the support of the body was firm, and locomotion was so easy and perfect that the individuals could, without special fatigue, walk long distances, even twelve to fifteen miles a day.

FATTY STOOLS IN DISEASE OF THE PANCREAS.—Dr. Ziehl records a case of cancer of the pancreas occurring in Professor Erb's clinic at Heidelberg. The case itself presented no unusual features, but the predominance of gastric symptoms suggested the stomach as the seat of the disease, which was marked by the appearance of a painful tumor in the left side of the epigastrium, and by jaundice. The motions were of a peculiar silvery-gray color, and found microscopically to consist in great part of masses of acicular crystals soluble in ether; chemical analysis showing the stools to be composed of fat to the extent of half the solids. On dissection there was found a large scirrhous cancer of the pancreas, which had invaded the walls of the stomach and duodenum, and occluded the common bile-duct. The pancreatic duct was dilated and distended except at its termination, which was lost in the cancerous mass. The writer, after saying that the case illustrates the well-known fact of pancreatic disease being marked by the occurrence of fat in the stools, shows that the form in which the fat occurred in this case was exceptional, almost requiring the microscope for its detection, whereas it usually occurs in amorphous masses recognizable at once, and not in crystalline form. He further shows, by reference to cases recorded by Friedreich, Nothnagel, and Gerhardt, that when fatty crystals in excess are present, there is not only pancreatic disease, but also occlusion of the bile-duct, the last-named author finding crystals resembling tyrosin and leucin in a case of catarrhal icterus.—*The Lancet*, September 22, 1883.

CALCULOUS AND OTHER AFFECTIONS OF THE PANCREATIC DUCTS.—Dr. Johnston, of Washington, D. C., in an elaborate paper in the October (1883) number of *The American Journal of the Medical Sciences*, presents a good clinical study of this subject. Although he has been able to collect only thirty-five cases in which, upon post-mortem examinations, stony concretions were found in the pancreas, he cannot but believe that calculi are present in the pancreas far oftener than is supposed, and he can only attribute the paucity of medical literature upon the subject to the inexperience or carelessness of observers.

OPERATIVE INTERFERENCE IN IRREDUCIBLE DISLOCATIONS.—In a paper on this subject in the *Revue de Chirurgie* of August 10, 1883, Dr. Poinsot formulates the following conclusions: 1. In considering the question of operation, dislocations must be divided into three classes, according as they are recent, of short, or of long standing. 2. Direct operative interference in recent luxations should not be attempted, except in dislocations of the ankle and of the thumb, in which division of the tendo-Achillis and of the lateral ligaments respectively may be practised. 3. In luxations of longer standing subcutaneous section is first to be employed. Arthrotomy should be reserved for those cases in which the vicious position of the bone renders the limb useless, or menaces its vitality by pressure on important parts, as in certain dislocations of the shoulder and of the knee, or when the dislocated fingers impair the utility of the hand. 4. In old dislocations, in which subcutaneous section is of no avail, arthrotomy, with or without resection, is necessary in the ginglymoid joints, such as the elbow, knee, ankle, and fingers; for the enarthroidal articulations, as the jaw, the shoulder, and the hip, osteotomy would be preferable.

PULMONARY CONGESTION OF RHEUMATIC ORIGIN.—In the medical section of the Association Française pour l'Avancement des Sciences, Dr. Huchard presented an interesting paper on this subject. Congestion of the lungs may occur during an attack of acute articular rheumatism, and may be generalized, in which case it is often most alarming in its severity, or local, when it is usually unattended with danger. Or, perhaps more frequently, it comes on without any articular symptoms in rheumatic subjects. There are two forms under which the congestion presents itself. In the first, it is acute and may be shifting. This variety may often be accompanied by profuse hemoptysis, preceded by symptoms of pulmonary congestion But the hyperæmia may not go as far as hemorrhage, and then there are symptoms only of great oppression. Sub-crepitant râles are audible, together with blowing respiration. There is dulness on percussion, and absence of vocal fremitus. Such a state is sometimes incorrectly diagnosed as pleurisy. The second form is stationary and chronic. The congestion may persist for years, finally disappearing entirely upon the advent of articular symptoms. Such cases are very liable to be mistaken for tuberculosis. The hemoptysis, the author thinks, is due to the giving way of portions of the vascular walls in which pathological changes of rheumatic nature have taken place. It is analogous to the rupture of the cerebral vessels in apoplexy. Arthritic hemoptysis, while of much less gravity than that occurring in pulmonary tuberculosis, yet calls for systematic and persevering therapeutical management. M. Huchard recommends the prolonged use of quinine, salicylate of soda in small doses. The arsenical preparations, or the iodides of potassium and of sodium, also in small doses. He also uses intestinal derivatives, such as aloes, leeches to the anus, dry cups, or even phlebotomy.—*La Tribune Médicale*, September 16, 1883.

CLASSIFICATION OF THE PORRO OPERATIONS.—Dr. Robert P. Harris, of Philadelphia, states, in *The American Journal of the Medical Sciences* for October, 1883, that, from a careful examination of the literature of this subject, he finds that we have no less than nine forms of operation, some of them differing very materially from the original, all called by the name of "Porro," and classified together, although having very different rates of mortality. It is hardly necessary to claim that this is very unjust to the originator, and unfair to his operation. If the Porro method is to stand upon its merits, rated by its proportion of cures, we must in justice exclude from the record all the cases not strictly deserving of the title. As it would only complicate matters to make nine orders of cases, Dr. Harris proposes to combine them where this can be fairly done, and thus reduce the list to four classes. 1. True Porro operations; Porro-Müller operations. 2. Puerperal utero-ovarian amputations, with the pedicle dropped in. 3. Premature ablations of the gravid uterus, the fœtus not being viable. 4. Prévôt's operation, miscalled "Porro." (Utero-ovarian amputation after laparotomy for rupture of the uterus. Dr. Harris appends a tabular record of 140 cases, from which it appears that the Porro operations, carried out as originally designed, has saved 46¼ per cent. of the cases; the Porro-Müller method, unmodified, has saved 52⅛ per cent.; and the combined, 48⅝ per cent. of the women, and 90 out of 118 children.

MASSAGE IN THE TREATMENT OF HYPOPYON.—By gentle pressure and light friction over the eyeball through the lower lid, Dr. Just has succeeded in diminishing the purulent collection in the anterior chamber and causing it to become mixed with the aqueous humor. In several cases of hypopyon treated in this way he has seen absorption occur very rapidly. Dr. Hirschberg obtains similar results, when the collection of pus is not fixed, by causing the patient to turn frequently from side to side, changing the position hourly. Dr. Klein has employed massage also in other affections of the eye, such as phlyctenular conjunctivitis and diffuse parenchymatous keratitis. It is contra-indicated when it causes pain or provokes a persistent ciliary irritation.—*L' Union Médicale*, August 25, 1883.

CLOSURE OF THE JAWS AND ITS TREATMENT.—Dr. J. Ewing Mears, of Philadelphia, in an able paper in *The American Journal of the Medical Sciences* for October, 1883, discusses the various operations which have been suggested for the relief and cure of permanent closure of the jaws and the objections urged against them. He then narrates a case in which he operated in the following manner: By division of the ramus of the jaw, about its middle, exsection of the condyle and division of the insertion of the temporal muscle, thus releasing the coronoid process and affecting its removal with the condyle —division of the masseter muscle at its points of origin—non-interference with the cicatricial band. By this plan he hoped to secure sufficient space for free movement of the remaining portion of the ramus, and he proposed to utilize the cicatricial band as a *quasi* ligament, and obtain movement of the bone between this band and the internal pterygoid muscle. By division of the masseter at its point of origin, he proposed to relieve the tension of this muscle and more effectually prevent union of the divided fibres. The plan of operation suggested and practised is novel, in the fact that it includes removal of both coronoid and condyloid processes with the upper half of the ramus, as well as division of the masseter, external pterygoid, and temporal muscles, at the point of origin of the former, and the insertion of the latter. The advantages claimed over other methods are: 1. Its application to all forms of permanent closure, that due to temporo-maxillary anchylosis, as well as to cicatricial formations. 2. The utilization of the entire body of the jaw in opening the mouth, not only affording in this way greater advantage in mastication and articulation, but serving to prevent deformity. 3. The formation of a more perfect artificial joint in the removal of both processes, thus overcoming the resistance of the more or less fixed upper segment, when the joint is made either in the body or the ramus of the bone.

PROGNOSIS OF MITRAL STENOSIS.—Dr. Duroziez, writing in *L' Union Médicale*, states that mitral stenosis is not of such grave import, as regards life, as is commonly supposed. It is true it causes more or less acute suffering, but the patients live nevertheless. He records a number of cases of this affection, from a study of which he draws the following conclusions: 1. Mitral stenosis, simple or combined with other valvular lesions, permits in exceptional cases, life to pass the sixtieth year. 2. The complication of mitral regurgitation does not aggravate the prognosis. 3. The coexistence of aortic insufficiency renders it more grave. 4. The complication of a tricuspid lesion is of very serious import.

DELIVERY OF HYDATID MOLES BY EXPRESSION.—Dr. Gregoric advocates a new method for the treatment of hydatid moles (*Allgemeine Wiener Medizinische Zeitung*, August 21, 1883). When the diagnosis is definitely made, uterine contractions should be induced by a vaginal tampon and subcutaneous injections of ergotine. Then, as soon as the os is dilated for about an inch, the contents of the womb are to be forced out by Credé's method. This need not be done rapidly, but may be practised repeatedly at short intervals. The mole is squeezed out through the vagina, as the author expresses it, like a sausage. The uterus quickly contracts, and the hemorrhage ceases.

JEQUIRITY IN GRANULAR LIDS.—Drs. Parisotti and Galezowski have not met with the success in the employment of jequirity that other oculists have obtained. The local trouble was not aggravated, neither was it in the slightest degree benefited. But an intense febrile reaction followed the application and continued for over ten days, while the immediate effect of the jequirity was to cause great suffering.—*Recueil d' Ophthalmologie*, August, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, October 27, 1883.

NEW METHODS OF TREATING WOUNDS.

THE ingenuity of German surgeons has been much exercised within the last two or three years in order to devise some new method of dressing wounds. It is now nearly two years since carbolic acid and the Lister dressing began to be superseded in many hospitals by the use of iodoform. The latter drug was so enthusiastically adopted that its introduction into general surgery was thought to constitute an epoch in modern surgery. It was soon found, however, that many other substances would answer as well or better. In 1880–1 Kocher began to recommend his bismuth dressing. He used the subnitrate of bismuth suspended in water in a strength of one per cent. The wound was covered with this and over it a dressing of gauze and rubber was applied somewhat like that of Lister. Remarkably good results were reported by himself as well as by Langenbeck and some others. In a few cases, however, it was stated that a gangrenous stomatitis was excited, and it is known that if the amount of bismuth (subnitrate) be excessive, symptoms resembling lead poisoning develop.

In September, 1881, Esmarch began to use at his clinic an iodoform dressing covered with bags of dried turf-mold. Neuber reported excellent results from this.

In 1882, Fischer of Strasbourg, recommended the use of naphtholin as a substitute for carbolic acid and thymol.

For a considerable time, oxygenated water has been used by MM. Pean, Paul Bert, and Brochin, in the wards of the Paris hospitals. It continues to be used in some special classes of diseases, as those of the eye.

After Koch's experiments which demonstrated the superior power of corrosive sublimate as a germicide, its use in surgery was taken up. Kummell formulated a method of applying it in the treatment of wounds which goes by his name, and which has been very generally adopted.

Kummell's dressings consist of sublimated gauze and cotton, sublimated silk, sublimated catgut, sublimated oil, and sublimated inorganic dressing materials. These latter comprise powdered glass, sand, coal ashes, asbestos, lint made from spun glass, and, for purposes of drainage, capillary threads of spun glass. Sublimated gauze and cotton are designed to take the place of carbolized gauze and cotton. They are made hygroscopic in the usual manner, and then impregnated with the following: corrosive sublimate, 10 parts; alcohol, 4,490 parts; glycerine, 500 parts.

Bruns, of Tübingen, has recommended the use of wood-wool. This consists of finely ground wood, such as is used in the manufacture of paper. It is clean looking, delicate fibred, soft, yellowish-white, having an odor of fresh wood, and absorbs immensely.

The wood-wool possessing the highest absorbent properties is obtained from the *Pinus picea*. It is passed through a sieve, dried, and impregnated with a solution of half per cent. of sublimate and ten per cent. of glycerine. It is extraordinarily cheap. It is exceedingly elastic even in thin layers, so that bandages can be put on more lightly with this than with any other dressing. It takes up twelve times its weight of water.

Dr. Bruns claims that high absorbent qualities in surgical dressings are of vast importance, "as primary wound healing takes place the more readily the more completely the discharges are conducted from the wound—the dryer the wound and its vicinity are kept—as it is under these circumstances that decomposition processes are most securely excluded. If the dressing has absorbed the secretions of the first few days, the evaporation and drying up of the contained moisture should be permitted; then, as the discharge from the wound diminishes, the dressing, now dry, can remain a considerable time as a permanent one. With this object in view, it is indispensable to omit the occlusive layer of the typical Listerian dressing, as the drying of the dressing is prevented by it. With the same object in view he prefers the covering of the wound with glass-wool in place of the protective, as under this the suture line is of necessity kept moist.

In his own clinic the mode of dressing, according to the *Medical Times and Gazette*, is exceedingly simple. After the wound has been disinfected by copious irrigation with a one per cent. (.1 per cent.?) solution of sublimate, and the drainage-tubes have been placed in, the suture line is covered with a layer of glass-wool. Upon this is placed a sufficient quantity of wood-wool either simply wrapped in sublimate gauze or sewn up in the form of a pillow. The latter form is preferred for hospital use. He considers it best then, first to place on the wound a small pillow, then a larger one that will widely overlap this in all directions. These are to be fastened on with a firm binder.

In addition to the above methods others have been devised for the treatment of minor wounds. Powdered sugar, which is aseptic, is recommended by several German surgeons.

We venture to say that it makes little difference in the vast majority of cases which antiseptic or aseptic method is used, provided there be cleanliness, free drainage, and pressure properly applied.

RESECTION OF THE STOMACH AND THE GASTROSCOPE.

PROFESSOR J. MIKULICZ, of Krakaw, has written a series of articles in the *Wiener Medicinische Wochenschrift*, giving an account of a successful case of stomach resection performed by himself, and of the utility of the gastroscope in connection with these operations. There had been, up to July, 32 cases of stomach resection reported. Among these, there were 26 deaths and 8 recov-

eries, giving a per cent. of recoveries of twenty-five. Three of the cases were operated upon for gastric ulcer with stenosis, and of the three, two recovered. There were, therefore, 29 cases of cancer of the stomach, with 5 recoveries, from the operation. Of the 24 fatal cases, the cause of death in 15 was collapse, in 1, inanition, in 5, peritonitis. In the opinion of Mikulicz, the death of the last six by inanition and peritonitis, was due either to deficient skill in operating, or to conditions which, at present, our better knowledge can prevent. As for the deaths by collapse, there is hardly an operation in surgery which has had relatively so many victims from this cause. The explanation lies not only in the length, character, and severity of the operation, but especially in the fact that the patients are generally already weakened by the disease.

There is no operation in surgery which has had its technique and, we might say, indications so well defined in so short a time. It is now generally admitted that the operation is justifiable, but only in the most carefully selected cases. The diagnosis must be exactly made, the growth must be still small, the disease in a comparatively early stage, and the patient not greatly weakened or marasmic.

It is in the hope of its assisting to a more exact diagnosis that Mikulicz recommends the gastroscope. He has examined a number of healthy and carcinomatous stomachs with this instrument. In the healthy stomachs, the pylorus appears like a longitudinal split, or like a star-shaped, oval or circular opening, which is surrounded by a thick wall of red mucous membrane. The muscular wall is constantly in motion. In cases of cancer, the thick protuberance about the pylorus is either entirely absent, or is thrown up in small folds. The powerful muscular action of the pylorus is absent. The gastroscope is evidently not yet a great help in the matter of diagnosis, but further observation and use may make it more so.

THE HOT SPRINGS OF ARKANSAS.

So far as we can learn of the actual facts regarding Hot Springs therapeutics, it is the most empirical of all health-resorts. Very little careful study of their action has been made. At the same time it is a place which is very widely known, and very frequently used.

Hot Springs is a city of five thousand inhabitants, of which nine-tenths is a floating sick population. It lies in a valley between two mountains, along the sides of which there are now seventy-one springs.

The sick population is a heterogeneous one. The patients come from all parts of the country. Those that predominate, says Dr. J. C. McMeehan, in an article upon the Hot Springs published in the *Cincinnati Lancet and Clinic* are those "affected with syphilis, rheumatism, and nervous diseases. All kinds, however, are met with. Women broken down in health from fashionable dissipation, late hours, balls, champagne, and from the effects of sacrificing at the altar of Venus, come here for quietude, rest, pure air, and the benefits derived from bathing. Men broken down from the excessive use of alcoholic drinks and the morphine habit find relief at this place, and under the pleasing and stimulating effect of the waters are able to give up the habits of drinking and opium eating."

An atmosphere of charlatanry seems to hang about the place. This is shown first in the current belief that the waters have great electrical properties. Many of the springs are named after some supposed predominant constituent in them. Thus, there is an Arsenic Spring, which for several years was peculiarly useful in the treatment of skin diseases, until it was found that it contained no arsenic. Another spring, called the Alkaline Spring, is thought of especial value for alopecia, and bald-headed people soak their bare pates for hours in its delusive waters. Another spring is particularly adapted to corns and bunions, while various others have special reputations for the cure of disease. No attempt seems to be made to classify the springs therapeutically upon any other than an imaginative basis.

The water varies in temperature from 93° to 157° F., and the various springs discharge a total of over half a million gallons of water daily.

That this water contains any specially valuable medicinal properties, apart from its heat, seems at present to be improbable. An analysis made by Professor D. D. Owen, as quoted by Dr. McMeehan, gave the following:

	Gramme.
Organic matter combined with some moisture ...	1.16
Silica with some sulphate of lime, not dissolved by water	1.40
Bicarbonate of lime	2.40
Bicarbonate of magnesia	0.50
Chloride of potassium	0.04
Chloride of sodium	0.218
Oxide of iron and a little alumina	0.133
Sulphate of lime dissolved by water	0.320
Loss. Iodine. Bromine.....	0.053
Total.....	6.222

This analysis does not include any of the gaseous or volatile constituents which it is claimed are present; neither does it include the electricity—an agent whose presence always appeals helpfully to the lay mind.

Dr. McMeehan believes, as the result of his experiments, that there is a compound of silicon present. He also asserts that the galvanometer indicates the presence of more electricity than is usually to be found in hot water, and the same observer claims some peculiar physical properties for the water. The experiments are not recorded with sufficient carefulness and detail, however, to warrant any inference from them.

The effects of a continued use of these baths are, says Dr. M., remarkably great alterative action, correcting retrograde metamorphosis; equalizing and moderating nervous excitability; increased action of the absorbent system; increased disintegration of tissue; increase of assimilation and reparation; activity of all the excretory organs, eliminating mineral blood poisons rapidly, such as lead, mercury, and iodine, so rapidly that compounds of the two last named are here frequently prescribed, and are often taken in heroic doses with almost perfect impunity; eliminating also the effete and poisonous products of the disintegration of tissue, by the kidneys and skin, and producing some abatement of the morbid craving for alcohol and tobacco in those who have acquired the habit of the excessive use of these stimulants.

The pathological conditions in which these waters are

contra-indicated, according to the same authority, are: Whenever the pulse is materially accelerated by the disease; an exalted action of the heart and arteries; where there is a tendency to active inflammation or any form of acute disease; where the action of the heart is in any way interfered with, either by structural change or the presence of liquid in the pericardium; where there is a marked increase of the temperature of the body; in hectic fever; in cancer, or in any form of epithelioma; where there is a tendency to wasting hemorrhages, and with pregnant females.

There is no doubt whatever that many persons are benefited by a residence at Hot Springs. They seem to be particularly attractive to the venereal. The cause of this is formulated very rationally by the gentleman whom we have quoted. The change in mode of life, the removal from annoying cares to a healthy, well-regulated resort, the powerful stimulating, diaphoretic and diuretic action of the waters are all potent factors. No doubt the high reputation which the springs have got, and the impalpable electrical agencies supposed to exist in the waters also act effectively upon the patients' imagination.

MULTIPLE SMALL ABSCESSES OF THE LIVER.

AMONG the greater difficulties with which the diagnostician has to contend, few are more perplexing than irregular pyrexiæ, more especially when due to an unknown cause, or when the concomitant symptoms simulate those of distinct affections.

So much has been added to our knowledge of abscess of the liver—local parenchymatous hepatitis—by Murchison, Frerichs, Sir Joseph Fayrer, and others, that, as a rule, there is no very great difficulty in establishing a diagnosis, more especially since the introduction of aspiration. The case is somewhat different, however, with multiple small abscesses. The descriptions of cases heretofore noticed have been far from clear, and the negative results which may be gained by aspiration render the diagnosis extremely difficult. The paper by Dr. R. E. Carrington, therefore ("Guy's Hosp. Reports," vol. xli., 1882), in which the clinical histories and post-mortem appearances of thirteen cases are given, is a valuable addition to our knowledge of the subject.

So far as can be judged from the history of the cases after coming under observation, the duration of this affection is extremely variable. Cases may terminate in death in twenty days or less, or they may run on for two or even six months. There is nothing particularly striking in the clinical histories, and it is only by a grouping together of many symptoms that we can diagnose the affection by exclusion. When brought into the presence of a patient suffering with this disease, we immediately notice that he appears to be extremely ill. The eyes are sunken, though they may retain their brightness, the body is more or less emaciated, and the general aspect is that of apathy and drowsiness. Not infrequently the *facies Hippocratica* is seen, and this, with the drawn-up position of the lower limbs and usual dorsal decubitus, indicates the abdominal pain from a local or general peritonitis. The skin, until the fifth or eighth day, is generally hot and dry. After this time, or before in a few cases, profuse diaphoresis comes on, chiefly remarkable for irregularity. The tongue is dry and coated with a brown fur, sometimes creamy at the onset. The dorsum of the tongue may be brown while the edges are pale or red, and sordes collect on the teeth. Abdominal distention, occurring with ascites, a general peritonitis, or local peritonitis about the liver with rigid recti, is an almost constant symptom. The respiration is thoracic, as would be expected, may reach 38 or 44, and the breath is sometimes sweetish. Though not a constant symptom we generally find enlargement of the liver, which progressively increases. With the enlargement of the liver, the thoracic respiration, and the peritonitis, local or general, there is, except in rare cases, abdominal tenderness or positive pain, especially in the hepatic region, auscultation showing the peritoneal rub, evincing inflammation over the hepatic surface. Percussion may cause intense pain over the whole hepatic region. Sometimes there is a throbbing pain across the front of the lower part of the chest, continuing for hours, or the pain may be of the sharp cutting nature common to local peritonitis.

Vomiting is not a constant symptom; it is present in about one-half of the cases. The vomitæ may consist of blood or blood-stained fluid, giving bile reaction, and are intensely bitter. If the blood comes up in clots we are safe in diagnosticating a concomitant gastric or duodenal ulcer. Diarrhœa and constipation may be said to be equally frequent and are connected with obvious causes, as dysentery, gastric ulcer, and peritonitis. When diarrhœa with pea-soup stools occurs, it is due to an ulcerative process of the bowel, generally in the region of the cæcum. Rigors may or may not be present; they are by no means constant. Jaundice is present in about one-third of the cases; it varies in intensity but is general, the urine containing bile-pigment, and, where the liver substance is extensively involved, contains leucin and tyrosin with diminution of urea (one case, however, is reported in which there was an excess of urea). Albumen and sugar may be entirely absent, or there may be a large amount of one or the other. The specific gravity varies between 1.020 and 1.025, and the color may be described as that of porter or strong tea, though it may be normal. Where there is much bile pigment we should expect acicular or violet-colored crystals. Inability to pass the urine is quite a common symptom. The temperature may be described as irregularly febrile. In the same case it may run as high as 106° or 106.5°, and may then, in a comparatively short space of time, become subnormal. In the cases reported by Dr. Carrington the evening temperature rarely went below that of the morning. At the moment of death the thermometer has noted 111° Fahr. in the rectum. The pulse is weak—very feeble in some cases—and compressible. It not uncommonly runs as high as 125 to 135 and may even reach 175 and higher.

From the above description it is seen how inconstant are the symptoms, and, consequently, how difficult the diagnosis must almost necessarily be. With regard to constancy and importance, the febrile temperature may be placed first. Even this, however, is not an invariable symptom, for Murchison has recorded a case of multiple pyæmic abscess of the liver without pyrexia. But with a febrile temperature, our attention is naturally directed either to the thoracic or abdominal cavity, in these cases more especially to the latter, when we consider the aspect

of the patient, the abdominal pain and tenderness, and the hepatic enlargement, with the peritoneal "rub," the emaciation, the apathy, and the dry brown tongue. These are the most constant and important symptoms. As a matter of course, a previous history of an affection which is recognized as a factor in suppurative hepatitis is an important point, but, unfortunately, it is not always to be had.

The pathology of this affection is interesting. The liver is studded with numerous small abscesses, which, on section, pour forth a quantity of pus mixed with bile. The portal veins are found to be extremely distended throughout in many cases, being in a state of intense suppurative inflammation, and contain pus. Section through the portal vessels shows a purulent fluid running from the vein. The venous walls are thickened and soft, and, in parts, detached from the surrounding hepatic tissue. With the exception of cases commencing in an obstructive inflammation of the hepatic ducts, the pus-point is always in a radicle of the portal vein. In some cases the portal and splenic veins are plugged by pus and emboli. Save the exceptions above noted the hepatic ducts are not the principal or primary seat of the disease, for though the smaller ducts may contain pus the main branches are unaffected, and their walls present no appearance of inflammatory exudation. Although the tubes may contain a yellow tenacious material, they are not all distended, and the distention of the smaller ducts is, therefore, secondary. In parts the suppuration may extend as far as the capillaries and secreting system, and a section shows the lobules distinctly marked out, they being of a dull yellow color, with the hepatic vein visible as a red spot in the centre. We may infer that the inflammation has been primarily in Glisson's capsule and the tubes afterward involved. It is to be regretted that no examination was made in these cases for pyæmic micrococci, as their presence or absence might throw much light on the subject.

ABSCESSES OF THE NECK CAUSING SUDDEN DEATH.

THE last contribution to our literature from the pen of the lamented Lidell is not the least instructive of his many interesting papers. In the *American Journal of the Medical Sciences* for October, 1883, is an article showing that certain abscesses of the neck, apparently of but little surgical importance, may cause sudden death from hemorrhage or asphyxia. While these cases are not common, they do occasionally occur, and, as is seen from Dr. Lidell's paper, are more than likely to cause very troublesome symptoms and death, if not promptly dealt with.

A most important feature of these abscesses, as regards prognosis, is their tendency to burrow in the connective tissue of the neck, especially downward (as in a case reported), causing inflammation or compression of the recurrent laryngeal nerves, inflammation and adhesions at the apex of the lung, even pulmonary engorgement and pneumonia, death taking place from asphyxia. The dyspnœa and subsequent asphyxia may be due to œdema of the glottis, caused by inflammation of the adjacent tissue. This œdema glottidis may manifest itself even one or two days *after* the discharge of the abscess. Added to this there is danger from opening of the œsophagus or trachea by the inflammation and erosion, or the abscess may discharge itself into the pleural cavity, or mediastinum.

No less important, from a prognostic point of view, is the tendency, in some cases, to erosion of the cervical blood-vessels, and death from hemorrhage. The walls of vessels may become so softened and weakened by the inflammatory process, that, when the external support is removed by the evacuation of the pus, they immediately give way to the blood-pressure. In cases of hemorrhage from this cause it is difficult to determine its exact source. It may come from a branch of the external carotid or from the trunk of the internal, or several arteries may be involved at the same time. Finally, such an amount of dysphagia may be produced as to lead to death from starvation.

As regards the treatment of these deep-seated abscesses of the neck, it should first be remembered that they rarely tend to spontaneous cure. If left to themselves or treated expectantly, their tendency is to burrow and cause the destructive results already mentioned. They should, therefore, be laid open as early as possible, wheresoever they may form. In opening them, he would be a rash surgeon who would follow the general directions for opening abscesses, and plunge the lancet down to the seat of pus. The cervical structures are too important for any such procedure as this. If convenient or possible, the patient should be anæsthetized, and a most careful dissection of the superjacent tissues be made down to the pus. As regards after-dressings, these cases call for drainage-tubes and antisepsis. Where hemorrhage occurs, the bleeding vessel should be found and ligated on either side of the bleeding portion. If the vessel walls are so softened as that the ligature cuts through, the actual cautery should be used, but never styptics. It may be that the abscess cavity cannot be laid open so as to bring the delinquent vessel into view. In these cases the common carotid should be firmly and continuously compressed against the cervical vertebræ so as to allow coagula to form and plug the bleeding point. Should this procedure fail, the external, preferably the common carotid, should be ligated. The latter, because as before stated, cannot always be determined, whether the hemorrhage comes from the internal carotid or from some branch of the external. By the timely performance of this operation considerable reputation may be gained and a life saved.

CHLOROFORM NARCOSIS DURING SLEEP.

FOR some time past considerable discussion has taken place through the columns of THE RECORD relative to the possibility of producing chloroform narcosis during sleep. In the article by Dr. John H. Girdner (vol. xxiii., p. 457), he reports five cases, in each of which he found it impossible to induce a chloroform sleep without first causing a prior interval of consciousness, marked by sudden awakening, with resistance, etc. In all of these cases the drug was administered from a towel and at a distance of eight inches from the face; in every instance, also, in the same manner and without the slightest variation. Viewed in this light, possibly the results were

not in the main remarkable. Therefore, perhaps, it is not at all surprising that some of our readers, while submitting certain cases flatly opposed in their results to those of Dr. G., should suggest that the drug be held at a greater distance, that the extreme liability to reflex disturbance be carefully avoided, and the approach made more gradually, instead of maintaining a specified distance of eight inches; also, that a certain variation in its quantity and mode of administration be practised. Still, from "the large experience in the administration of anæsthetics" which Dr. G. has had, and from the fact that in his experiments "every possible precaution was taken that no error should creep into the result," a certain amount of presumption would appear to lurk in outside advice; on the contrary, nevertheless, we are glad to note that the gentleman mentioned (in a second article which we publish elsewhere) has availed himself of the suggestions offered, and evidently in the spirit with which they were intended. In the article referred to, eighteen additional cases are recorded, all unsuccessful. Of these latter cases, while some of them undoubtedly show positive results, yet others are open to criticism. It would also be interesting to know in what number of instances, while securing these eighteen, the attempt was attended with success.

Moreover, although it has been stated that the testimony of medical experts is anything but conclusive, yet perhaps we might accredit these gentlemen with a slight amount of judgment and discrimination. And while some of our correspondents have seen fit to take issue with Dr. G., especially relative to the final clause of his paper, still we believe, however broad the assertion referred to may appear at first sight, that the medical profession of America is of sufficient number to leave no doubt as to the plain truth contained in it.

In reviewing the several cases which have come to our notice, a few of which have appeared in previous issues, we give a short *résumé*:

In Dr. Murill's case the desired result was secured, apparently with the greatest ease. He omits, however, to state the method of administration, as well as the distance and approach. Dr. Borcheim, formerly house-physician at Mt. Sinai Hospital, mentions numerous instances in which narcosis from chloroform during sleep has been produced by him, while resident at the above institution, and likewise without the slightest difficulty. In Dr. May's case a similar success followed upon the careful and gradual administration of the drug. In Dr. Morgan's patient the first attempt was quite satisfactory, but on a subsequent occasion this was not so marked. Dr. Nelson found some slight restlessness precede the narcotism. This condition passed off, however, on removing the towel somewhat farther, and then upon gradually bringing it nearer the face complete narcosis followed. Finally, Dr. Halderman mentions three cases, the subjects of which were convicts in the Ohio State Penitentiary. Of these two were completely successful. The patient was then roughly handled and otherwise tested, so as to admit of no doubt as to the result. In these cases the chloroform was given from a handkerchief, and, at first, from a distance of two feet.

With the exception of Dr. Halderman's, all the cases above cited were children.

It would appear, therefore, from the foregoing and from other accumulated evidence, that it is quite possible to bring a sleeping patient profoundly under the influence of chloroform, without first causing a period of consciousness. This is more especially true of children. In adults, chloroform narcosis during sleep is, apparently, not so easy, and in many instances it probably cannot be accomplished at all. But that in certain cases it is possible, particularly where careful judgment and skill is exercised in the administration of the drug, we think there can be no doubt. To be successful, however, it is necessary that the means employed, the quantity used, etc., should be selected with excellent judgment, and the drug given by an experienced physician, with great care and by easy and gradual approaches. But that even this plan faithfully carried out will not succeed in all cases is equally evident. In this light, however, we cannot help thinking that the possibility of this procedure would be more practically conclusive were all the successful attempts recorded side by side with the failures.

THE ELECTION AT THE COUNTY SOCIETY OF NEW YORK, AND WHAT CAME OF IT.

THE result of the recent election of officers of the Medical Society of the County of New York for the ensuing year, is quite significant of the sentiment in the medical profession of this city and county, concerning the New Code. The attendance was unprecedentedly large. Never before in the history of the Society had so many assembled on the occasion of an annual election. The reason was well understood by all present. The issue did not rest on a mere choice of the individual gentlemen nominated, for they were all thoroughly representative and beyond reproach. But each ticket was openly nominated as representing one or other side of the Code question. There was the Old Code ticket, composed of gentlemen committed to a repeal of the recent action of the State Society, and the New Code ticket, supporting such action. Each party selected its strongest men, Thomas heading the ticket of the Old Code advocates, and Van der Poel representing the liberals. In fact, the tickets were so arranged as to leave little, if any, chance for purely personal preferences for candidates. The election was to be an expression of opinion regarding the principles which each ticket advocated. And so it is generally conceded by all who took part in the contest. The New Code ticket was elected by an unquestioned majority in a perfectly fair election, and as the result of the largest vote ever polled in this or any other County Society. It is quite probable that the question will remain settled with the County Society for a long time to come. At least it shows the relative strength of the two parties in a very decided manner.

Now, certainly the time seems to have arrived for dropping the discussion of the Code question. There has been altogether too much acrimony infused in the expression of individual views on both sides. Each gentleman is entitled to his own opinions and beliefs. But that is no good reason why there should be so many volunteer missionaries on both sides who should deem it their duty to preach to the benighted heathen.

We have enough of honest men on both sides to save the profession, no matter how the Code question may

be settled. There are enough of medical men good and true who, acting according to the dictates of their consciences, can take care of the fair fame of scientific medicine whether they govern themselves by Old Code, New Code, or no code. We have more trust in the men themselves than in any laws that can be made for them. There is a common platform upon which all can meet. The well-educated professional gentlemen need not be told where it is. There is no law which, of itself, can make a bad man do right, or a good man do wrong. The triumph of the New Code shows that medical men are growing more liberal as to interpretations of professional conduct, and that of itself is a good sign. But the most liberal man among the New Coders cannot abuse his privileges if he is made of the right material, is and just to himself, to his patients, and his profession. It is the man after all. If the doctor, Old Code, New Code, or no code, is not a man, all the voting, one side or the other, does no good. It is perfectly proper to wish that the right sort of man should be as free as possible to do what he believes to be just. There is certainly no harm in that; and from such a standpoint the result of the election on Monday evening may be viewed with becoming satisfaction.

SANITARY INSPECTION OF SCHOOLS.

We are glad to learn that the energetic President of the Board of Health is taking the proper steps for a sanitary inspection of the different public school buildings in the metropolitan districts. Such an inspection, which we doubt not will be carried on in a thorough and systematic manner, is very much needed. We shall be prepared for all sorts of developments regarding defective plumbing, bad ventilation, deficient light, and improper heating appliances.

General Shaler, in his communication to Sanitary Superintendent Day, asks as an initiative to his movement that a consolidated report of the school-house inspectors recently made be forwarded, and that the sanitary inspectors be directed to continue such inspections, embracing every school-house, including those of the parochial schools in the city.

As soon as inspections of a district are completed a synopsis of them is to be made, showing which are found in a satisfactory condition and which defective, and the character of the defects.

The sanitary inspectors are also requested to make frequent visits to the school-houses within their respective districts as a part of their regular duties, with a view of detecting any neglect of the sanitary rules in reference to the case of the sinks and closets.

We shall be glad to note the progress of this good work.

ANOTHER PRIZE FOR SCIENTIFIC WORK.—A prize, established in accordance with the wishes of the late Signor Bufalini, Minister of Public Instruction in Italy, of the value of 5,000 francs, and to be known as the Bufalini Prize, has been announced for international competition. The subject for 1883–84 is, "The Application of the Experimental Methods to Science." The essays must be received by the Secretary of the Medical Faculty of Florence before October, 1884.

News of the Week.

SIR WILLIAM MAC CORMAC, the distinguished surgeon to St. Thomas' Hospital, London, during his visit in this city the past week, has been the recipient of many courtesies from the leading men of the profession. Numerous private dinners have been given to him, and altogether he has had the freedom of medical New York. On Thursday evening a brilliant reception was tendered him by Drs. J. Marion and Harry Marion Sims, at which a large number of representative men from this city and elsewhere were present. Nor has he been here merely for sight-seeing. During his short stay with us he has delivered two lectures upon surgical subjects which were models of their sort, and were appreciated accordingly by the large audiences which assembled to hear him. Sir William sails for his home to-day and carries with him the best wishes of his many friends in this city, Philadelphia, Boston, and Washington.

PRIZES AWARDED BY THE INTERNATIONAL COMMITTEE OF THE RED CROSS.—The Society of the Red Cross has awarded, through its Committee, the following prizes:

First.—A prize of 2,000 francs for the best essay on "Improvised Methods of Treating the Wounded and Sick," awarded to Dr. Port, of Munich.

Second.—A prize of 2,000 francs for the best essay on the "Improvising Means of Transporting the Sick and Wounded," awarded to Dr. Port, of Munich. These essays are to published.

The prize offered for the best essay on the Improvising Isolation Hospitals was not awarded.

GAILLARD'S MEDICAL JOURNAL comes to us in its monthly form again and presents a most attractive appearance.

THE PHILADELPHIA COUNTY MEDICAL SOCIETY at its last business meeting again rejected women candidates for membership.

THE BRAIN OF CAREY, THE INFORMER, has been weighed by the district medical officer, at Port Edward, Dr. Ensor. Its weight was sixty-three ounces, "the mass lying in the cerebellum!"

This is just the weight of Dr. Abercrombie's brain, and it exceeds the average by about fourteen ounces.

BLACK-MAILING A PHYSICIAN.—The papers relate a curious story regarding an attempt to rob Dr. George A. Gordon, a prominent and wealthy physician of Sandusky, O. He was one day last week summoned by telephone to call upon a sick person at a house in the suburbs. The doctor drove at once to the house, and was politely ushered in by a man in his shirt sleeves. The door was quickly closed, and the man instantly seized the doctor by the throat and held a "billy" menacingly above his head and demanded his money. The doctor only had $10 about him, and offered that to the man, but the latter refused it and compelled the doctor to give him a check for $500 and an order on Mrs. Gordon for a similar sum. The man then tied the doctor's hands, locked him in the house, took the doctor's horse and buggy, and drove away.

The doctor managed to free his hands, leaped from the window, ran to a store near by and telephoned his wife

not to pay the order, and to summon the police to arrest the man if he presented it. The fellow drove to the doctor's house, but seeing the police hurriedly approaching the residence he turned and drove rapidly into the country. He was subsequently apprehended and found to be a homœopathic physician who had graduated from the Cleveland College about five years ago.

THE HOSPITAL SUNDAY COLLECTIONS.—The Saturday and Sunday Hospital Association of this city held a meeting, last week, at St. Luke's Hospital, preparatory to the annual hospital collection for 1883. A report made by the Executive Committee indicates that the association has made large extension in its field of activity, and that the collection to be taken in the different churches and synagogues of the city on the last Sunday of the present year, on behalf of the city hospitals, will be by far the largest in the history of the association. Last year's collection fell somewhat short of the amount realized the two years previous, and this fact brought to the association a conviction that the work required more systematic efforts than it had previously received. There are about 350 Protestant churches, chapels, and missions in New York, together with about 30 synagogues. Of this number, only 97, most of them being Episcopalian, Presbyterian, and Reformed Dutch, contributed last year. This year nearly every minister in the city has received a call from a gentleman duly authorized to represent the association, and by this method of personal appeal all the denominations have been brought heartily into the work, and the canvass now approaching a close indicates that there is a probability that the number of contributing churches on Hospital Sunday the present year will be nearly trebled, 275 churches being already pledged to make contributions. Besides those given above as fully pledged to a collection, about 25 churches are on the list as having given provisional promises, and as there are still a score of churches whose pastors have not been visited, and hence constitute promising recruiting material, the association seems justified in indulging the hope that it will be able to report at the close of the collection for 1883 that on Hospital Sunday the sick poor of the city were remembered by 300 Christian and Jewish congregations. It was reported that in addition to the churches that sent their contributions to the treasurer of the association, 23 churches sent their collections directly to the treasurers of various hospitals.

THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS met September 17th, 18th, and 19th, at Freiburg. About six hundred members and visitors were present, a smaller number than was expected. The medical work, so far as is yet reported, was not very extensive. Professor Liebermeister delivered a long address upon "Recent Work in and Contributions to Therapeutics." The address was mainly a review. In the Section for Internal Medicine, Weil, of Heidelberg, described a hereditary form of diabetes insipidus. Among ninety-one members of a family, of whom seventy were alive, twenty-three had diabetes insipidus. Rumpf, of Bonn, stated that the narcotics chloral and morphine, as well as to a less extent chloroform, ether, and alcohol, produced lowering of bodily temperature, which he found to be due to a lessened consumption of oxygen. In the Section for Pædiatry, Demme, of Berne, presented evidence of the infection of children with tuberculosis by cows' milk. In the Section for Military Medicine, a discussion on the best form of dressing for wounds took place. Maas contended for sublimate dressings, Küster for iodoform dressings. Considerable material was presented in the Sections on Surgery, Gynecology, Laryngology, and Psychiatry.

YELLOW FEVER.—The reported appearance of yellow fever at Brewton, Ala., has been investigated by direction of Surgeon-General Hamilton, who ordered Acting-Assistant-Surgeon Stone (stationed at Savannah), to make a report upon the subject after a thorough examination. Dr. Stone telegraphed that the disease prevailing at Brewton is yellow fever and that 34 cases with 18 deaths had occurred up to the 19th inst. An official report in writing will be given in a few days by Dr. Stone.

The Cape Charles Quarantine Station on Fisherman's Island, Chesapeake Bay, was discontinued on the 15th inst. It is contemplated to erect permanent buildings on the island for quarantine purposes, if Congress decides to keep up a Government station at that point.

The cordon at Pensacola navy yard was ordered removed on the 25th inst., as there had been no new cases of yellow fever developed since the 7th inst., and the last case was convalescent on the 11th. The villages of Woster and Warrington have suffered severely from the scourge, and will be glad to have all restrictions removed.

Reports from Havana to include the 13th inst. show that there had been 19 deaths during the week. Surgeon Burgess states that he had inspected and fumigated twelve vessels bound to United States ports, among them the steamer British Empire from Vera Cruz bound to New York.

The disease is gradually disappearing from Vera Cruz, there having been only 11 deaths from yellow fever during the week ending October 4th. Surgeon Mamegra, sanitary inspector, has been ordered to return home at the close of the month; he reports no cases of yellow fever in the shipping for the past two months. The disease at Guaymas, Mexico, is pronounced to be yellow fever by experienced medical men, though it lacks some of the prominent symptoms of that disease, such as acid vomit, suppression of urine, etc. It is now on the decrease, only 7 deaths having occurred during the three days ending October 4th. In Hermosillo the cases have been more numerous but the deaths less frequent.

THE CHOLERA.—Consular reports from China indicate that cholera is gradually dying out, though sporadic cases still continue to occur. In August there were five deaths at Shanghai among foreigners, as against ten in July, while none are reported up to the 11th for September. Among the natives the mortality was in July 127, in August 120.

Quarantine restrictions have been modified at Malta so that vessels from quarantine ports are only detained sufficient time to cover ten or fifteen days from port of departure, the allowance for voyage being included. Twenty-two days are, however, required from Syrian ports, Barbary ports, Tunis, Turkish ports in the Levant, Austro-Hungarian ports, Algeria, and Cyprus.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 10, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

CURIOUS LESION OF FEMUR—POSSIBLE SPINAL ARTHROPATHY WITH HEMATOMA.

DR. WACKERHAGEN presented a specimen with the following history: On September 17th he was called in consultation to see Captain W——, who was suffering from an affection of the left knee-joint. The patient, aged fifty-two years, was born in the State of New York. He was greatly prostrated, emaciated, and anæmic, with loss of appetite; temperature, 102½° F.; pulse, 120 and feeble. The knee was flexed, the joint and surrounding tissues were greatly swollen, and appeared to be distended by some semifluid substance. He did not complain of severe pain unless pressure was made over the joint, or an attempt at motion was made, when his suffering was greatly increased. Upon paracentesis of the joint, only a small quantity of very dark-colored blood was discharged. The patient stated that he had always enjoyed good health until about three months prior to the operation, when he complained of pain at the knee-joint, and was treated for rheumatism. The pain was lancinating in character, and would occasionally disappear for a week at a time. A month later, he first noticed a slight swelling of the joint, which commenced to increase very rapidly three weeks before the operation. There was no family history of cancer or tuberculosis. The diagnosis was osteo sarcoma, and amputation advised.

The patient having consented to the operation, it was performed on September 19th, at the upper third of the thigh, under strict antiseptic precautions. Esmarch's bandage was applied and very little blood was lost while ligating the vessels. Present—Drs. Gregory, Rockwell, Anderson, Hallock, and McCary.

The temperature fell after the operation to 100½° F.; pulse, 100, and much improved in quality. The first dressings were not disturbed until the sixth day, when they were changed under the carbolized spray. Union by first intention, excepting a slight discharge of a brownish color through the inner drainage-tube, which gradually disappeared. Temperature continued to fall to normal, and did not at any time after the operation go above 99½° F. The patient's appetite returned on the day following, and he is now in excellent health, and ready to return to his home in Ulster County.

The specimen included three inches of the upper end of the tibia and fibula, the lower half of the femur, the muscles and external integuments of the part.

Upon section, immediately after the operation, the muscles, particularly the adductors of the thigh, appeared glazed, flabby, and infiltrated with serum. They were abnormally dark in color, and lacked the characteristics of healthy muscular tissue.

Occupying the cavity left by the rarifying bone was a recent blood-clot, quite firm, of uniform color and consistence throughout; while the absence of pus or other inflammatory products was a marked feature.

The posterior surface of the patella was softened in the centre and eroded at its lower border. The articular surface was roughened and showed evidence of beginning changes.

The usual layer of compact tissue at the head of the tibia was wanting, and the cancellous structure, which was bright yellow from the large amount of infiltrated fat and the absence of the coloring matters of the blood, extended to the articular cartilage. The edges of the semilunar cartilage were ragged, and the articular cartilage covering the head of the tibia was perforated at one point and excavation beginning.

The medullary canal of the femur, from the point of the amputation downward, was enlarged, and toward the lower extremity cancellated tissue encroached upon the compact shaft until this was entirely replaced.

Then the cancellous bone itself disappeared, the space which had been occupied by the bone, except a part of the external condyle, being filled with the clot of blood referred to above.

A thin shell of articular cartilage remained at the seat of the inner condyle.

THE PRESIDENT regarded the case as remarkable and unique. He suggested spinal arthropathy as a possible explanation.

DR. BIRDSALL thought the period from the first development of symptoms was rather short for the joint changes accompanying locomotor ataxy. Again, the change in locomotor arthropathy manifests itself first in the articular cartilages and in the bone subsequently, whereas in Dr. Wackerhagen's specimen the articular cartilages were least affected.

THE PRESIDENT had recently seen two cases of spinal arthropathy in which the joints were in the condition described by Charcot, Buzzard, and others. The cartilages were eroded, the articular ends of the bones absorbed and expanded by pressure, the joint surfaces dry and crepitating, and the ligaments relaxed In neither case was there pain on pressure, and the patients could walk reasonably well, allowing for the flail-like condition of the joints. In one case the patient was sent to the hospital for supposed tumor of the lower part of the thigh. In Dr. Wackerhagen's case it seemed that the hæmatoma was recent and accidental, and subsequent to the occurrence of the alteration in the osseous tissue.

DR. ELLIOTT asked if it might not be a case of purulent ostitis progressing rapidly.

THE PRESIDENT thought that if such were the condition considerable pus would have been found.

DR. GEORGE R. ELLIOTT presented specimens removed from the body of a man who had been operated upon for

CONGENITAL STRANGULATED HERNIA.

Wilson H——, eighteen years of age, United States, single, clerk by occupation, was admitted into the New York Hospital June 19, 1883, with the following history:

About 6 P.M. on the 17th inst. he began to have severe pain in the lower part of the abdomen, followed by nausea and infrequent vomiting. He was sailing in a yacht, and nothing was done for him till the next day at noon, when, after reaching land, an unsuccessful attempt at reduction of a tumor in the groin by taxis was made.

During the afternoon the vomiting became more frequent, and at night became stercoraceous in character. These symptoms persisted up to time of admission—12 M. of the 19th.

Examination revealed a tumor somewhat pear-shaped about the size of a hen's egg, occupying the right half of the scrotum, and extending to the external abdominal ring. The tumor was non-fluctuating, tender, and doughy to the touch, non-tympanitic on percussion, and there was no impulse on coughing.

Deep pressure over the abdomen gave rise to no pain, and there was no tympanites present. Vomiting was frequent and stercoraceous, the pulse could not be counted at the wrist, extremities were cold; in short, he was in a condition of partial collapse.

Operation was performed at 2.30 P.M. Upon opening the sac two drachms of dark fluid escaped. There was no marked odor present. The stricture was divided, and the contents of the sac, which were omental and intestinal, were not returned into the abdominal cavity, as they were thought to be gangrenous.

The patient did not rally after the operation, but remained unconscious, with a normal temperature, a very rapid and feeble pulse, and died at 2.30 P.M. the next day, forty-eight hours afterward.

At the autopsy, made eighteen hours after death, the lungs were found œdematous and congested.

The peritoneal cavity contained 50 c.c. of clear serum. The intestine in immediate proximity to the inguinal canal on the right side was slightly congested. There were no very marked signs of peritonitis present.

Four inches of the ileum, at a distance of eight inches from the caput coli, were found outside of the abdominal cavity, in immediate contact with the testicle. Omentum was also found in the sac beneath the coil of intestine, and at the point of constriction quite encircled the gut.

The loop of intestine which had been constricted was dark-colored in places, lustreless, coats thickened, and bound to the omentum beneath by recent adhesions. He did not consider the protruded gut gangrenous. The other organs were found normal.

The specimen was interesting, first with reference to the slight amount of peritonitis present. The only evidence of this was found in immediate proximity to the internal ring, where there was only a slight amount of congestion.

Another point of interest was the fact of a congenital inguinal hernia appearing at so late a date. It is not uncommon for a congenital inguinal hernia to become strangulated; but it is rather unusual for this form of hernia to appear for the first time as late as the eighteenth year of age.

An interesting question connected with the operation was, If the intestine was not gangrenous, and had been reduced completely, instead of being left in the sac, would it not have regained its normal condition more readily? The exact cause of death did not seem clear.

Dr. W. M. Carpenter referred to a case of strangulated hernia of the omentum, and a very small knuckle of intestine, in which he was called upon, many years ago, to operate on the fifth day after the strangulation occurred. When the omentum was exposed, it was found of a dark red color, but it was decided that it was admissible to reduce it completely. The general condition of the patient was bad; he did not rally from the influence of the ether and the operation, and died thirty-six hours afterward. At the autopsy there was no evidence of peritonitis, and the strangulated portion of the omentum and intestine had returned considerably toward the normal appearance, the restoration of the intestine being more marked than that of the omentum. He supposed at the time that the patient died of shock.

The President thought it well, in case of doubt, to leave the contents in the sac rather than to return them to the abdominal cavity. If the constriction is divided completely, there is no special danger from the adoption of this plan, while there may be a great deal of danger from interfering with recent adhesions by attempting to reduce the contents entirely.

Dr. J. C. Peters, Chairman of the Committee, made a partial report on

EQUINE SCARLET FEVER.

It consisted chiefly of a communication from Dr. J. W. Stickler, one of the members of the committee (see p. 421). Dr. Peters referred to the historical fact that the first descriptions of scarlet fever and diphtheria were closely preceded by the occurrence of these diseases in horses.

Dr. Ferguson presented specimens, with the following history:

CARCINOMA OF THE STOMACH, LIVER, AND KIDNEYS,

occurring in a female, aged sixty, a native of Ireland, and single. Excepting rheumatism, from which she suffered thirty years ago, she has been well all her life. She had no family history bearing on her disease. There was no specific nor alcoholic history. She was received for treatment into the New York Hospital, on the 24th of July, 1883. For one year previous to her admission she had been losing flesh and strength, and during the last six months of that time she suffered from nausea and vomiting after taking food. She complained of pain, not constant, but present the greater part of the time in the region of the stomach. A tumor could be felt in the epigastrium.

On examination, area of liver dulness was extended, and there was an area of dulness in the epigastric region over the tumor above alluded to, and continuous with the dulness over the liver area.

She did not improve on appropriate diet and medication, and after three weeks' stay in the hospital she began to vomit blood (which did not characterize her first vomiting) in large amounts; she also passed blood from her bowels. This was followed by collapse, and she died within twenty-four hours of the first appearance of hemorrhage.

Her temperature, which had been elevated—100° to 101°—previous to her hemorrhage, became subnormal after it—97° to 98°.

Her pulse and respiration became accelerated, the former varying from 100 to 120, and the latter superficial and from 30 to 40 per minute.

The cancerous masses in the organs involved are spheroidal in shape, varying in size from a pin-head to a pullet egg. Microscopically they are characterized by an abundance of small cuboidal cells, closely packed together and supported by a small amount of stroma, arranged into alveoli of very variable shape and size.

The Society then went into executive session.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 22, 1883.

David Webster, M.D., President, in the Chair.

After the reading of the minutes of the last stated meeting,

THE REPORT OF THE COMITIA MINORA

for the year was read, including the recommendation of eighty-one candidates for election to membership.

Dr. Austin Flint, Jr., moved to lay the report upon the table until after the election of officers.

The President decided that the motion was out of order.

The recommendation of the Comitia was adopted.

THE EXPULSION OF DR. H. H. KANE.

The Comitia further reported recommending that H. H. Kane be expelled. The recommendation was unanimously adopted.

The Treasurer, Dr. O. B. Douglas read his report, which, together with the report of the Auditing Committee, were accepted and ordered entered upon the minutes.

HONORARY MEMBERSHIP.

On motion, Dr. J. P. Milhau was instructed to cast an affirmative ballot for Brevet-Lieutenant-Colonel Bennett A. Clements, Surgeon U.S.A., for honorary member.

ELECTION OF OFFICERS.

The President appointed as Tellers, Drs. H. G. Piffard, W. T. White, E. F. Ward, W. T. Alexander, and Geo. F. Carey, who subsequently reported that 599 ballots had been cast, and that of these—

Dr. S. Oakley Van der Poel had received 375 for President; Dr. Andrew H. Smith, 380 for Vice-President; Dr. Wesley M. Carpenter, 385 for Secretary; Dr. Charles H. Avery, 380 for Assistant Secretary; Dr. Orlando B. Douglas, 384 for Treasurer; and Dr. F. R. Sturgis, 385; Dr. David Webster, 383; Dr. Daniel Lewis, 377; Dr. F. R. S. Drake, 373; and Dr. Joseph W. Howe, 378 for Censors.

Dr. T. Gaillard Thomas had received 220 for President; Dr. Charles A. Leale, 215 for Vice-President;

Dr. E. A. Judson, 210 for Secretary; Dr. P. Brynberg Porter, 215 for Assistant Secretary; Dr. H. D. Nicoll, 208 for Treasurer; and Dr. Charles McBurney, 224; Dr. Richard H. Derby, 208; Dr. Charles S. Wood, 210; Dr. Charles Hitchcock, 213; and Dr. Thomas H. Burchard, 215 for Censors.

The President declared that those members who had received the majority of all the ballots cast had been elected to the offices for which they had respectively been nominated.

Dr. Charles S. Ward, Chairman, submitted the

REPORT OF THE COMMITTEE ON ETHICS,

in which it was stated that only three cases had been brought before the Committee during the year, that one had been settled by arbitration, and the other two had been reported to the Comitia Minora.

REPORT OF THE BOARD OF CENSORS.

Dr. H. B. Conrad, Secretary, read the report in which it appeared that the work of causing compliance with the medical act of 1880, and of punishing offenders against that law, had been successfully continued.

It also appeared that a suit had been successfully carried on against the United States Medical College, which had no legal right to confer the degree of Doctor of Medicine.

Special reference was made to the importance of having some common standard of qualifications, which shall govern the admission of candidates for the privileges of the practice of medicine and of the appointment of some proper board which shall pass upon the fitness of the future practitioners of the State of New York.

The Board, adopting the recommendation of the Counsel, E. C. Ripley, Esq., earnestly recommended that the faculties of the various schools endorse no diplomas in which there is the slightest ground for doubt; that it would be better if all candidates for the practice of medicine holding diplomas requiring endorsement should be compelled to pass an examination before being allowed to register.

The other members of the Board were Dr. Daniel Lewis, Chairman, Drs. J. D. Bryant, F. R. Sturgis, and Walter R. Gillette.

The report was accompanied by a report from the Counsel, giving a detailed account of the legal work which had been done by the society.

Dr. A. E. M. Purdy, Chairman, read the

REPORT OF THE COMMITTEE ON PRIZE ESSAYS,

in which it appeared that only one essay had been submitted, and the committee deemed it unworthy of a prize.

The Secretary read the following resolutions received from the Medical Society of the County of Westchester:

Resolved, That the representatives of this County in the State Legislature be requested to urge the passage of an

ACT TO PROHIBIT ALL MEDICAL COLLEGES FROM GRANTING DIPLOMAS,

and requesting all candidates for the degree of Doctor in Medicine to appear before a State Board of Medical Examiners, who shall recommend successful candidates to the Regents of the State University for a diploma.

Resolved, That the Secretary send a copy of this resolution to the members of the Legislature from this County, and to every County Medical Society in the State, and urge them to take the same action.

The communication was referred to the Comitia Minora.

Dr. J. C. Peters made a verbal report on

EQUINE SCARLET FEVER,

and referred especially to communications on that subject already published in The Medical Record by Dr. Stickler. The Committee was continued, increased to five, with power to fill vacancies, and accept resignations subject to the will of the Society.

On motion, the Treasurer, Dr. O. B. Douglas, 123 East Thirty-sixth Street, was instructed to send by mail a volume of the "Transactions of the State Medical Society for 1883" to any member who requested the same, not to exceed one hundred and twenty volumes, for *one dollar* per volume.

The Society adjourned to meet at the College of Physicians and Surgeons, on November 26th, at 8 P.M.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

To the Editor of The Medical Record.

Dear Sir: It is but two decades that the settlers in Minnesota have held undisputed possession of its soil. The horrors of the great Sioux massacre, which occurred in 1862, are still fresh in the memories of many men. In view of these facts, the rapid growth and development of the former "land of the Dakotahs," and more especially of its twin cities, St. Paul and Minneapolis, must strike us as truly phenomenal. Exactly why these neighboring towns are still called twins it would be difficult to determine, however, for the only Siamese bond that at present links them is the reciprocal spirit of eager rivalry, watchful jealousy, and utmost contempt. Still, it seems quite possible that the very ardor of mutual antipathy has been instrumental in raising both cities far above the level of other towns in the State. So that here again the life of two cities illustrates an old experience, that intense competition may prove an unmixed blessing to both competitors. The universal activity and restless enterprise of these pioneer cities is but faintly reflected in their professional life, in so far, at least, as this relates to medicine.

The stream of practice flows along rather slowly and quite smoothly. But it is the slowness of equanimity, and not of sickly, exhausted lethargy. Of course there are occasional homœopathic and other irregular eddies. But these are utterly impotent to disturb the main current. Such distressing whirlpools and rapids as we Eastern code-contentionists wilfully and wickedly create, are nowhere to be found. Indeed the Western medico generally does not, apparently, envy us the open display of bitter feud and strife within the ranks of a profession that can ill afford to merit public scorn and ridicule.

Our Western *confrère* has perhaps heard of the code. In rare instances he has even "read it some." That is the old one. But he does not hanker after it. Nevertheless, he tries to live the life of a gentleman. He feels satisfied that he can do this through the prompting power of his own impulses; hence he cares very little for the old code, and just about as much for the new one. He upholds regularity, especially in the matter of sending bills. Yet he rarely hesitates to meet his homœopathic brother—openly, as they do most things out there in that benighted West, not on the sly, as they do some things down here. The result is a happy one. Almost universally, in the far West, there exists a feeling of harmony within the profession that sounds to Gotham ears like the strains of sweet music long forgotten, though dearly loved. The evident moral of the matter is this: let the western doctor come East to learn the refinements of differential diagnosis; but by all means let us go West to be taught the refinement of undifferentiated fellowship. Evolution is doubtless a great science, but we have not yet reached that point of mutability which will allow a man born without the instincts of a gentleman, to become metamorphosed into one through the potent agency of a code. And the gentleman-born carries within his breast

a better, brighter, nobler code than human pen or printer's ink can ever devise.

There is no dearth of doctors in St. Paul and Minneapolis; still the profession is not overcrowded, and there is room for good physicians. As for the two years' product of our vast grinding mills, that species of dazzling ignorance would find transplantation to Minnesota soil unprofitable, if not ruinous. It could never take root there and bring forth choice blossoms of bungling stupidity, gross carelessness, and reckless behavior generally.

Some of the Westerners are so pachycephalic and vulgar that they fail utterly to appreciate such dainty delicacies. And what they do not appreciate they sometimes shoot. At least so the writer was credibly informed, although he never saw it done.

Dr. C. H. Boardman, of St. Paul, the medical director of the Northern Pacific Railroad, kindly gave your correspondent a few points about the practice of medicine in that city and Minneapolis. It would appear that the largest incomes, in both towns, are derived by homœopaths. And in neither does it exceed $15,000. The established physician in good standing earns on an average between four and six thousand dollars. The usual office fee is one dollar, and a visit to the house of the patient two. Consultations pay five dollars. Confinements from ten to twenty-five. There are no dispensaries to lure the willing patients from the office of the doctor. A majority of the people habitually pay their bills. The inevitable blackleg and deadhead is represented by an insignificant minority. The personal relations between the representatives of the two schools are quite good. Quarrels but rarely occur. Consultations between them are infrequent, but entail no far-reaching consequences, and rarely engender even temporary partisan dissensions.

Pure science naturally has few votaries there; but the average practitioner is a busy, intelligent man, fertile in resource, quick to imitate what is new, and eager to advance his art with himself. It should be understood, however, that art precedes self, in this statement, solely by courtesy. But it may be comforting to our Western brethren to be assured that such precedence is not utterly unknown, even in the enlightened East.

As regards lady practitioners, they appear to be fairly successful, and while they can hardly claim to excel the average male physician, they are justly entitled to all the credit that belongs to holding one's own, even when handicapped by natural and artificial disadvantages. The specialties are at present but little developed, although oculists and aurists are beginning to crop up rather numerously.

Dr. Ames, the Mayor of Minneapolis, assured the writer that the professional duties and responsibilities of a large office practice were quite compatible with the faithful and energetic management of municipal affairs. In an eastern city of over one hundred thousand inhabitants a physician elected to the mayoralty would have to give up that office, or his office practice would give up him. They appear to govern less West than East, although they may seem to require more government.

Your correspondent has purposely dwelt at some length on the local aspect of medicine in St. Paul and Minneapolis, for what was said concerning these cities applies to a great extent to all the larger towns of the region visited. As regards the smaller places, a young physician locating there would have to take his chances. If fortunate, the settlement may quickly prosper, and he would then be assured of a rather handsome competence. On the other hand, it might remain stationary, or even retrogress. In that case, unless he could afford to begin anew elsewhere, his life would remain one of toil, anxiety, and hardship, unillumined by any legitimate hope of future prosperity. There is a great deal of quiet heroism and touching pathos about the weary struggle for existence of many a medical man in the little border-towns of advancing civilization. Life there is a rugged reality, very apt to quickly dissipate illusions, and, alas, too often to inflict, through shattered hopes and dire disappointments, a wound that rankles but can never heal. Many a promising career has there been wrecked through insufficient equipment, a mistaken sense of power of sustained energy, or a yielding to temptation in the shape of gambling and other vices. Yet the man of conscious strength and integrity may easily walk unscathed through the alluring valley of sin, and avoiding its numerous pitfalls, safely climb the hill of success and eminence.

This little wayside sermon is preached for the benefit of the young eastern graduate, who is uncertain where to settle. Let him not blindly believe that in the New Northwest fame and money will be poured into his lap undeservedly, or with but slight exertion. Let him rather take to heart the words of Dante, and—

> "Think not that under the shade of
> Canopy reposing, fair fame is won,
> Without which, whosoe'er consumes his days,
> Leaveth no vestige of himself on earth."

The gospel of overwork has latterly been preached into quite a fashion, and with some amount of justice, one may readily concede. But work should not be confounded with overwork. It may often, in individual cases, be difficult to draw the line between the two. Yet, surely, where the general welfare of a village, a town, or any large community is concerned, it is safer to err on the side of overwork than on that of idleness. America owes its proud greatness to American work, call it overwork if you will, but not to transatlantic habits of underwork, or indolence.

A prominent German guest of Mr. Villard on this excursion, a quick observer and close student of the life of various nations, said that if the Teuton laborer and farmer could but be taught to work as the American does, he could make as much of a proverbially poor country as we are making of a proverbially rich one. In a concluding letter the writer hopes to bring to a close these random observations of a trip that, to him at least, was highly entertaining and instructive.

Very truly yours,

EDMUND C. WENDT.

136 WEST THIRTY-FOURTH STREET,
New York, October 18, 1883.

New Instruments.

THE ELECTRO-OSTEOTOME.

A NEW INSTRUMENT FOR THE PERFORMANCE OF THE OPERATION OF OSTEOTOMY.

BY MILTON JOSIAH ROBERTS, M.D.,
NEW YORK,
PROFESSOR OF ORTHOPEDIC SURGERY AND MECHANICAL THERAPEUTICS IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL; VISITING ORTHOPEDIC SURGEON TO THE CITY HOSPITALS ON RANDALL'S ISLAND, ETC.

GRANTING that surgeons, especially of late, have too frequently resorted to operative procedure for the relief of bony deformities; that they have shown a disinclination to adopt the more judicious, safe, and rational treatment by means of suitably constructed orthopedic apparatus, there is nevertheless a large and diversified class of cases which can only be successfully dealt with by operative interference. Many patients suffering from bony deformities that would have been amenable to mechanical treatment in their early stages come under the observations of the surgeon too late in life to avoid an operation. Again, in general hospitals and amputatory clinics, where we have to do even with young subjects, the expense of orthopedic apparatus and the necessarily long continuance of mechanical treatment to effect a cure, may deprive the patient of therapeutic measures which would be adopted in private practice, thereby relegating his destinies to the domain of osteotomies.

It therefore becomes the subject of legitimate inquiry as to the best means of performing these operations.

It is not the purpose of this communication, however, to review the various operations of Mayer, Annandale, Barton, Adams, Ogston, Boswell, Reeves, Macewen, and other surgeons; nor to discuss in detail the merits and demerits of the tools which have been used by operators other than myself. I wish simply to call attention to an instrument which, in my opinion, in a large range of cases possesses important advantages over any that have hitherto been employed. This conclusion has been reached after a sufficiently extended and varied personal experience from which to make deductions.

The instruments used by the surgeon in the operation of osteotomy[1] may all be classified under the following heads: 1, chisels; 2, cutting forceps or nippers; 3, shears; 4, gimlets; 5, drills; 6, saws.

Of these instruments the saw possesses the superior qualities of rapidity, certainty, and evenness of cut. Furthermore, by its use the concussion and shock incident to the employment of the chisel and mallet, are entirely avoided. Why then do surgeons ever resort to the use of chisels, drills, etc.? The reasons are as follows:

First, as to the use of the long or straight saw. Though admirably adapted to the direct application of hand-power, its to-and-fro movements render it hazardous to the soft parts under many circumstances. This objection, however, has been very successfully overcome in that form of the instrument devised by Dr. George F. Shrady, in which the blade is operated through a protecting metallic sheath. His saw is very narrow, and was especially designed for simple subcutaneous transverse section of bone. Another objection to the straight saw is the impossibility of executing the to-and-fro movements in certain situations. Moreover, it is not well adapted to the removal of cuneiform segments from bone deeply embedded in the soft parts. And, finally, it is, for the most part, impracticable to use it in making longitudinal cuts.

I pass in review the objections to the use of the hollow (trephine) and chain saws, which must be patent to all.

The circular saw, though equally well suited in form to the removal of transverse wedges of bone and the making of longitudinal cuts, and not open to the objection of to-and-fro movements, has never been extensively employed by surgeons. The reasons for its disuse lie, then, not in its form, nor in its rotary movement. Carrying our inquiry a little further, however, they become evident. Paramount among these is the impossibility of a direct application of hand-power to the evolution of the rotary motion of the circular saw. If manual power be used at all, some mechanism is necessary in order to develop rotation of the blade.

Two difficulties present themselves in the adaptation of hand-power to driving the circular saw. One of these is the disadvantage with which force is applied at the axis of motion to overcome resistance at the peripheral margin. The other is the rapidity of rotation necessary to effective work. If the problem were the construction of a hand machine to rotate a circular blade meeting with no resistance at its periphery, nothing would be more simple. Or, if power could be applied at the margin of the blade to overcome resistance at the axis of motion, the device of such a machine would still be a very simple mechanical problem. It is, then, the great resistance which the serrated edge meets when in contact with bone, and the necessity of overcoming this by power applied to the arbor of the blade that make the task of construction and propulsion so difficult.

A number of ingenious inventions have been offered, but when put to the test of sawing bone on the living subject have not answered in practice what they promised in speculation. As a rule their blades have been placed at a right angle with the main shaft, and, on this account, have been difficult to hold in position. They have, without exception, been deficient in power, or speed, or both. Of the hand or foot-motors which have been devised for driving circular saws, that which is ordinarily used for dental purposes is the most complete in its workmanship and satisfactory in its execution. But the blades of these saws are of too small diameter to frequently be of service to the surgeon, and the engines and gearing which drive them are not built of sufficient strength to admit of the employment of larger saws. In concluding the adduction of objections to the circular saw it is necessary to state that surgeons have always experienced great difficulty in protecting the soft parts while using it.

From what has been said it will be seen that in order to produce an osteotome of superior excellence to any we now have, it must be capable of dividing any bone in the human body, from the smallest to the largest, such division to be rapid, smooth, and certain, even though it be of the hardest bone; the blade of the instrument should readily follow the direction given it by the surgeon; it should be adapted to simple, cuneiform, and longitudinal osteotomies in any situation, of easy manipulation and imparting to the hand of the surgeon all the sensations that could be appreciated with a probe; possessing strength and portability, and not likely to get out of order; and, finally, capable of being used without danger to the soft parts.

Such an instrument is illustrated in Fig. 1, from a photograph. It is here represented as it appears when

FIG. 1.

suspended and grasped by the hand of the surgeon ready for action. It consists of a small electro-motor actuated, through insulated wires, by a powerful battery and carrying a circular saw that revolves in a plane parallel with that of the central shaft. A hollow cylinder with a collar-like base is firmly screwed to the end plate of the motor and forms the handle of the instrument. Upon this a soft-rubber hand-piece, fashioned like that of a carpenter's chisel, is slipped and fastened in position; an arrangement which adds security to the surgeon's grip when operating. The central shaft of the motor is continuous through the hollow hand-piece. At its distal end, a right-angle mitre-gearing connects it with the saw-bearing pivot. A metallic shield guards the proximal aspect of the serrated blade. Shields are provided for each size

[1] The word is here used in its broadest signification.

of saw. The depth of cut which it is possible to make with a given saw of course depends upon the diameter of the blade, being a trifle less than the distance from the centre to the periphery. The direction of the kerf, however, can be so modified as to enable the operator to easily divide a bone having a greater diameter than half that of the saw he is using.

The saws which I now use have been constructed with great care in accordance with my directions. Prior to their adoption I made extended experiments with many forms and sizes of teeth and thicknesses of blade. In order to adapt the saw to the requirements of individual cases, I have thus far found it desirable to have four sizes, viz.: 32 (1¼ inch), 41 (1⅝ inch), 51 (2 inches), and 63 (2½ inches) millimetres in diameter. The teeth are coarse in proportion to the size of the saw, and number 18, 16, 14, and 12, respectively, per linear inch (25 mm.). These saws are so ground as to gradually diminish in thickness from the periphery to the centre. Binding in the kerf, when making deep cuts, is thus prevented. If the blade be made of the same thickness throughout, the side friction will be so great that the motor will be unable to drive the saw with adequate force and speed after it has fairly entered the bone. Provision is still further made for increasing the width of the kerf over that of the saw by giving to the teeth a little "set." This latter procedure is a very delicate operation and requires considerable mechanical skill to do it properly. It is important that the alternate lateral inclination of the teeth should be perfectly regular throughout; otherwise, the smooth and easy cutting of the saw will be interfered with. In form, the serrations are slightly *raked* instead of *hooked*. They are so filed that their cutting edge is at a right angle with the blade, instead of being at an oblique angle, as in most circular saws. The blades are made of the best steel and have a special spring temper. They are not so hard as those used in cutting iron or brass, nor are they so soft as those used in cutting wood. Saws tempered for metal work, are too brittle for sawing bone; they would be apt to snap in the kerf, should the operator permit any lateral deviation of the blade. Tempered for sawing timber, the teeth would soon become dull by contact with hard bone. Lastly, great pains is taken to have the blades of the saws absolutely free from "buckle" or twist. This is necessary in order that they shall run perfectly true and not bind in the kerf.

Upon the plate at the opposite end of the motor from that to which the hand-piece is attached are two binding-posts, which receive the ends of the electrodes connecting the instrument with the battery. Considerable experimenting was necessary in order to determine upon a form of battery having sufficient duration and power without unnecessary bulk. A general idea of the battery which I use can be gained from Fig. 2. It is a *zinc carbon* battery. The cells are of glass and ten in number. Their dimensions are 2 x 7 x 8 inches. Each cell contains one zinc plate 6 x 8 inches, placed between two carbon plates of equal size. The fluid used is a solution of bichromate of potassium, known as red acid, somewhat stronger than that used in the ordinary faradic batteries. The duration of maximum power furnished by this battery is from twenty to twenty-five minutes, sufficient time for the performance of any number of osteotomies which the surgeon will ever be called upon to do at one sitting. The battery is only permitted to be in action during the brief periods required for making sections of bone. The zinc and carbon plates are firmly fastened to a board which is suspended above the glass cells by means of coiled springs, as shown in the cut. A lever at the side of the battery-box furnishes the means of submerging the plates in the fluid at pleasure, by simply depressing it. Upon releasing the lever, the plates are automatically drawn out of the fluid by the action of the springs. Conservation of battery-power is thus made perfectly feasible, for as soon as the surgeon has made a simple or cuneiform section of bone, the lever can be released and the further working of the battery prevented until he is again ready for action. In transportation the fluid is emptied from the cells. The framework which serves for the suspension of the plates is so constructed that it can be quickly taken apart and laid in the battery-box on top of the board to which the plates are fastened. This arrangement makes the battery very compact and readily transportable.

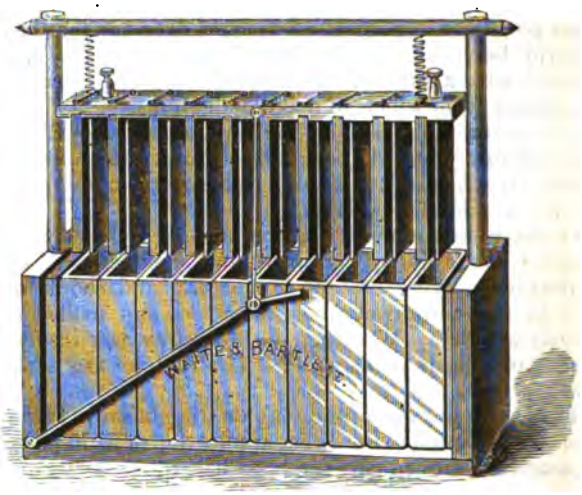

FIG. 2.

When using the electro-osteotome, it is suspended by a solid rubber cord, six or seven millimeters in diameter, from the cross-bar of an adjustible crane screwed to the edge of the operating-table. In this way all weight is removed from the hand of the surgeon, and leaves the instrument as thoroughly at his command as would be the most delicate probe.

The high rate of speed (about six thousand revolutions per minute) and the great force with which the saw is driven, necessitates skilful manipulations and great vigilance on the part of the operator in using the osteotome. The limb of the patient should be firmly held by an assistant, and the precise direction and extent of the cut determined upon before permitting the first impact of the blade against the bone. The keen eye and sense of touch of a skilful surgeon will readily appreciate whether there is any departure from the predetermined line of incision, or binding of the blade in the kerf.

And now as to the means of protecting the soft parts. Fig. 3 represents one form of protecting retractor, which I use in osteotomy operations. It was made for me by Messrs. Stohlmann, Pfarre & Co., and its form is specially adapted to the supracondyloid operation for genu-

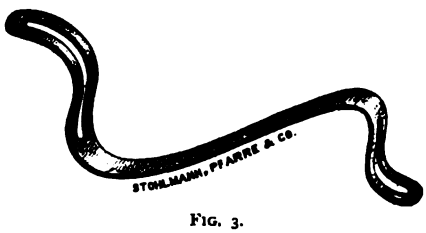

FIG. 3.

valgum. Two such instruments as is here represented form a pair. They are introduced one at a time through the linear incision in the soft parts, carried down to the bone and passed around it, much after the fashion of applying obstetric forceps. When in position they are pressed apart so as to make room for the blade of the osteotome. By their use there is no possibility of injuring any of the soft tissues while operating. The retractors are provided with a double curve at each end, one large, the other small, so as to adapt them to large and small bones.

In conclusion, I may say, in illustration of the labor and time-saving qualities of the electro-osteotome, that in operating for double knock-knee and bow-legs, I have

removed wedges of bone in from thirty seconds to one minute that would require from fifteen to thirty minutes to chisel out. The incision made with the saw is clean, the severed ends of the bone are not comminuted, and the two cut surfaces can be readily and perfectly coaptated.

The mechanical details connected with the perfection of the instruments and battery above described have been very numerous, vexatious, and at times discouraging. In prosecuting this work I have been the recipient of many courtesies at the hands of Mr. Edward P. Suter, of the Electro-Dynamic Co., Messrs. Wait & Bartlet, and the Western Electric Co., all of this city.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 13 to October 20, 1883.

BACHE, DALLAS, Major and Surgeon. Assigned to duty at Willett's Point, New York. S. O. 238, par. 1, A. G. O., October 18, 1883.

HUNTINGTON, DAVID L., Major and Surgeon, by direction of the President, will, until further orders, take charge of the office of the Surgeon-General of the Army and perform the duties pertaining thereto. S. O. 234, par. 3, A. G. O., October 11, 1883.

STERNBERG, GEORGE M., Major and Surgeon. Granted leave of absence for one month, to date from October 6, 1883, with permission to go beyond the limits of the Department, and to apply for extension of one month. S. O. 134, par. 3, Department of California, October 4, 1883.

TAYLOR, MORSE K., Major and Surgeon. Assigned to duty at Fort Sill, I. T. S. O. 210, par. 4, Department of the Missouri, October 13, 1883.

HEIZMANN, CHARLES L., Captain and Assistant Surgeon. Granted leave of absence for six months, with permission to go beyond sea. S. O. 235, par. 3, A. G. O., October 15, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 20, 1883.

BROWNE, J. M., Medical Director, ordered as member of the National Board of Health.

CLEBORNE, C. J., Medical Inspector, ordered to the U.S.S. Hartford at Panama, on duty connected with a court martial.

GORGAS, A. C., Medical Inspector, detached from Naval Hospital, Chelsea, Mass., November 10th, and ordered to the Naval Hospital, Mare Island, Cal.

HEFFINGER, A. C., Passed Assistant Surgeon, ordered to temporary duty at Navy Yard, Portsmouth, N. H.

HORD, W. T., Medical Director, ordered to the U.S.S. Hartford at Panama, on duty connected with a court martial.

WHITING, ROBERT, Passed Assistant Surgeon, granted leave of absence for three months.

The orders of W. J. Simon, Surgeon, and M. H. Crawford, Passed Assistant Surgeon, in last week's report, should read U.S.S. Shenandoah, instead of U.S.S. Trenton.

FELICITY AS AN OBJECT OF SANITARY RESEARCH is the novel title of an address delivered recently by Dr. B. W. Richardson before the Sanitary Association of Great Britain. That one should not only have a healthy life and a long life, but a happy one, was the burden of the oration. Felicity based on good plumbing, tight cellars, no cesspools, running water, perfect ventilation, no stimulants, no narcotics, no pastry, no bacteria—this is to be the object of the future rational man's endeavor.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 23, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 16, 1883.....	0	59	40	4	17	37	0	0
October 23, 1883.....	0	59	45	1	13	38	0	0
Deaths.								
October 16, 1883.....	0	19	5	3	4	13	0	0
October 23, 1883.....	0	20	12	1	2	20	0	0

THE USES OF HYDROBROMIC ACID.—Dr. Joseph Parrish, of Burlington, N. J., writes, referring to an article by Dr. C. L. Dana (*Journal of Nervous and Mental Diseases*) on hydrobromic acid, that he has recently used it in two cases: "In one, it relieves the insomnia in f 3 j. doses, taken P.M., say three doses a few hours before retiring. The other is a neurasthenic case, in which there is enlargement and hardening of sciatic nerve and general neuralgia. In this case I have given the bromides in several forms with but little impression, except bromism. Hoping to avoid the bromism, I resorted to 10 per cent. acid, with the effect of bringing out the bromism as distinctly as when she took either of the salts. In direct opposition to this case I have a lady of forty, an epileptic, who has taken bromid. potassium, in doses of from half a drachm to a drachm and a half, three times daily for the last fourteen years without the slightest sign of bromidism."

Dr. Squibb writes of hydrobromic acid in *Ephemeris*: "Its most common and probably most effective use, is as an addition, either constantly or intermittently, to solutions of the bromides when these have to be taken for a long time and in full doses. In this way full bromine doses may be easily maintained, while the effect of the bases is diminished. Full doses of the acid are difficult to administer on account of its intense acidity. It is best given with sugar, or with syrup, or with syrup of acacia, and with lemon syrup it is somewhat like lemonade. Large dilution is always advisable. The dose of the officinal acid is 2 to 4 fluidrachms, which is equal in bromine to 17 to 34 grains of the potassium salt. An equivalent dose of the 34 per cent. acid is about 27 to 54 minims. This acid is very useful in making extemporaneous solutions of many bromides. For example, the very effective bromide of lithium may be very easily made extemporaneously by prescription, by simply saturating, or nearly saturating, the acid with lithium carbonate."

MAD WITNESSES.—The United States Supreme Court has recently decided: "A lunatic or person affected with insanity is admissible as a witness if he has sufficient understanding to apprehend the obligation of an oath, and to be capable of giving a correct account of the matters which he has seen or heard with reference to the questions at issue; and whether he has that understanding is a question to be determined by the court upon examination of the party himself, and any competent witnesses who can speak to the nature and extent of his insanity."

THE DISEASE OF THE LATE COMTE DE CHAMBORD.—A recent issue of the *Gazette de Médecine et de Chirurgie* contains a long report upon the malady of the late Comte de Chambord, from the pen of Dr. Vulpian, the

physician so much favored by the deceased prince. Dr. Vulpian gives a detailed account of the post-mortem examination, and makes afterward an important admission. He says: "There can be no doubt that a diagnostic error was committed during the lifetime of the deceased, since we have not found the cancer we expected to meet in the epigastric region. In fine, the malady of the Comte de Chambord has been characterized, from an anatomical point of view, by ulcerations of the mucous membrane of the stomach, and especially of the mucous membrane of the gullet, and, from a clinical point of view, by a collection of symptoms that rendered at least probable the existence of a cancer in the stomach. This is an extremely rare, and, I think, a very interesting fact, for which reason I have published an account of it."

ITALIAN DOCTORS PUZZLED.—For some time past the medical faculty in Italy have been sorely puzzled by a strange disease of a contagious nature, which, although in its clinical features is somewhat like yellow fever, differs in some essential points from that and all other known diseases. The first appearance of the strange malady took place at Torre Annunziata, in June last. Early in that month a man attacked by fever, accompanied by a grave form of jaundice, died. During the interval since then fifteen other cases, followed by death, have occurred, exclusive of those last reported. In all the first symptoms were those of jaundice, followed by high fever, extreme prostration, and stupor. No case was accompanied by vomiting. Professors Semmola and Petronio were unable, in the post-mortem examinations they made, to recognize the pathological signs of any known clinical deaths or the characteristics of yellow fever. They found, however, enlargement with ulceration of the spleen, great fluidity of blood, and other indications of contagion, and describe the malady as a serious form of jaundice caused by infection, and belonging to the infectious typhoid-jaundice group of diseases.

BILLROTH'S LINIMENT AGAINST LUPUS.—

℞. Potas. sod..... 5. grammes.
Iodin. metallic..... 0.10
Glycerin. pur..... 50.

M. Apply with cloths to the affected region. Internally, give cod liver oil and depuratives.

A NOVEL METHOD OF BLEEDING.—The *British Medical Journal* of September 15th notes the relief of a case of cerebral congestion through blood-letting by means of a novel device. The patient, a fat, plethoric lady, fifty years of age, came under the charge of Charles Coppinger, F.R.C.S.I., and at the time of the surgeon's visit was in a condition of stupor, out of which she could be roused with some effort, but only to relapse into sleep again. Her breathing was heavy, and she presented all the symptoms characteristic of an overloaded vascular system. The indications for treatment were plain, and leeches not being obtainable, depletion by means of venesection was proposed. The friends of the patient, who were ladies, gave their consent, but were horrified at the suggestion of so barbarous a proceeding, and Mr. Coppinger, anxious to spare them the sight of blood, then and there conceived the idea of substituting the aspirator for the lancet. The patient, who had not long before been treated for hemicrania by hypodermic injections of morphia, was roused up and told that the needle was about to be "inserted into the skin of her neck, to which she at once consented." The needle of the aspirator was then passed into the external jugular vein, which was much distended, and four ounces of blood were withdrawn without difficulty. The result of this trial being satisfactory, the surgeon repeated the operation in the course of a half-hour, abstracting six ounces more of blood. The patient was speedily relieved of her alarming symptoms, and neither she nor her attendants suspected that she had been bled, until the procedure was subsequently explained to them.

A PROMISING SPECIALTY.—The *Canada Medical and Surgical Journal* places the proportion of people in the United States who have corns at one to five, and then asks: "If it costs $1.30 to effect a cure in each case, what would be the cost of placing every person on a sound footing?" The answer is not difficult, says the Detroit *Medical Age*: 5:50,000,000 :: 1:10,000,000 × 1.30 = $13,000,000. Here is manifestly a rich field for cultivation. Of all the specialties that of chiropody is, we believe, the least crowded. In our city of 140,000 we have but one, and, as far as we are able to ascertain, a similar distressing dearth is prevalent throughout this country.

SENSATION AND CONSCIOUSNESS NOT SIMULTANEOUS.—In the *Comptes Rendus*, M. Beaunis has given an account of his interesting investigations to determine the time between the instant of excitation of a sense and the instant at which the person indicates by a signal that he has become conscious of the sensation. In the matter of smell, for instance, he gives a table of the numbers obtained with ten substances, these ranging from thirty-seven hundredths of a second for ammonia and forty-six for acetic acid, to sixty-three for mint, and sixty-seven for carbolic acid; in the case of musk, M. Beaunis was unable, notwithstanding repeated attempts, to fix precisely the moment of the smell sensation. The numbers obtained are said to show that the reaction time for smell is longer than that for touch, sight, and hearing.

THE DRY OR MOIST TREATMENT OF CHRONIC PURULENT INFLAMMATION OF THE MIDDLE EAR.—Dr. L. S. Oppenheimer discusses the relative value of the dry and moist treatment of middle-ear inflammation, and advocates the former (*Louisville Medical News*). His method is as follows: The ear is first thoroughly cleansed by means of a syringe and warm water; it is then carefully dried and the powder insufflated, or applied on a piece of cotton through the speculum, the cotton being allowed to remain for twenty-four hours. The cotton absorbs the fluids and prevents them from again irritating the external ear. The powder may be insufflated through a goose-quill, care being taken to apply it to all parts of the cavity. The above is repeated daily for a few days, then on alternate days, then once a week for a week or two. The syringe is not required after the first two or three days. The agents which I employ in nearly all cases are iodoform and salicylic acid, the latter being applied daily whenever granulations exist; a few days after iodoform is substituted. It is of importance that absorbent cotton be inserted after each application, and removed the following day. It is also a good practice to use the Politzer air-bag once or twice a week during the treatment, as it helps to dislodge inspissated pus, tenacious mucus, etc. In brief, then, thorough cleansing before each application, insufflation of dry powders, and keeping the parts as dry as possible between the periods of treatment, will, I think, cure nearly if not quite all of these cases in a much shorter time than any other kind of treatment.

THE CONTAGIOUSNESS OF ECZEMA.—A correspondent of the *Boston Medical and Surgical Journal* describes the following case, asking if it was a coincidence. To us it appears more likely to be mistaken diagnosis: A., aged nineteen years, while living in New York, was attacked with acute general eczema. He returned to Boston, and slept a few nights with his brother W., and afterward with another brother, N. In about ten days W. and N. were both seized with this affection, and within a fortnight W.'s lady love also broke out with it. They were all healthy people, and had never before had any skin disease. Only two of the four were surrounded by the same hygienic conditions. Did one catch the disease from the other, or was it a coincidence? Duhring says: "Eczema is not contagious. It cannot be acquired from being in contact with or from handling the patient; nor can it be taken from the discharge."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 18 NEW YORK, NOVEMBER 3, 1883 Whole No. 678

Original Lectures.

GUNSHOT WOUNDS.

A LECTURE DELIVERED AT BELLEVUE HOSPITAL MEDICAL COLLEGE, OCTOBER 24, 1883.

BY SIR WILLIAM MAC CORMAC,

SURGEON TO ST. THOMAS' HOSPITAL, LONDON.

(Specially Reported for THE MEDICAL RECORD.)

GENTLEMEN: When your Professor of Surgery, Dr. Dennis, invited me to lecture to you, I asked to be excused because I felt that I had nothing ready worthy of your special notice. But he took away my objection by choosing a subject for me, and therefore I ask you to regard my presence here, and also whatever I may say, as being under his responsibility and not mine. The subject which Dr. Dennis chose for me, one which could not possibly be disposed of satisfactorily in a single lecture, is of very great interest, of very wide application, and one which I feel a great hesitation in speaking of at all, because in this country, perhaps more than in any other with which I am acquainted, the experience of surgeons with gunshot wounds has been very large and of an unusual kind. In your great civil war surgeons acquired a knowledge in this matter which is not exceeded by that possessed by surgeons in any other part of the world. Therefore it seems somewhat like, as we call it in our country, carrying coals to Newcastle, for me to speak upon this subject at all. The results of the experience which your surgeons have gained are embodied in those volumes coming from the Surgeon-General's office, which I may say for magnificence, for completeness of detail, and for abundance of illustrations, are equalled nowhere else in the world. The other day I had the pleasure and the advantage of visiting that volume of the war at the Medical Museum under the guidance of your distinguished countryman Dr. Billings, and there I saw abundantly illustrated, with the greatest detail, every form and kind of gunshot injury. There is enough material there to stock a dozen museums. I thought, therefore, that this was neither the time nor the place, altogether fitting, for a general discussion of surgical matters in time of war. Possibly, however, you may be somewhat interested in a few remarks which I may make regarding my personal experience during the time of the war between France and Germany, which took place some twelve years ago.

I speak not my own opinion, but that which has often been expressed by very competent authorities, of the work accomplished by that volunteer organization of which I had the honor to be a member during the Franco-Prussian war. It was superior both in quality and quantity to that done by any other voluntary organization, and there were many from different countries. I need scarcely have said this when I state that at the head of that ambulance corps was placed a man who is known not only in this country, but all over the world, as a surgeon of ingenuity, of device, of fertility of resource equalled by few; a man whose character is loved by every one who knows him—Dr. Marion Sims. One afternoon we received orders at Paris to reach, as soon as possible, the scene of action between the contending armies at a once important place, fortified by one of the greatest engineers of his day. When we reached the town, the hostile armies not being far distant, it was striking to notice that, although almost within hearing distance of war, there was not in the whole place a single soldier to be seen; not a single man in military uniform. The only doctor whom I found was a fine old French army surgeon, who entreated us to remain where we were, saying we should have plenty of work to do, and the result showed him to be right. But we were bound to push on, and we tried our best to do so. After spending the night on some benches at a railroad station, the next morning we accepted an offer, previously made, of a hospital pavilion containing four hundred beds, and situated on the ramparts of the town, overlooking the whole scene of action as far as the eye could reach. The beds were equipped fairly enough, although the cleanliness might have been a little more perfect. In the morning the battle began, and continued all day, and soon our wounded came in in very large numbers. The beds were full in a short time with the most serious of cases. Not only were the beds filled, but the wounded occupied the stair-steps, the floor, and every possible nook and corner; all the houses in the town and about the town were full of wounded soldiers. There were several thousand wounded men, the result of the day's fight. I scarcely need say that all that we could do was but very little amidst so much suffering. There was work for ten times, yes, a hundred times, as many as we, but all that we could do we tried to do to the best of our abilities. All sorts of operations had to be done continuously by day and by night. We were blessed, fortunately, with a certain amount of equipments, as we had drugs, appliances of various kinds, and we had the advantage of a hospital placed in the front line of battle. All that day, while the battle was raging, we were in the very foremost of it. The shells exploding and whizzing around our heads was not, I assure you, very agreeable when about to perform an operation. Once in a while a shell would explode and strike the pavilion, but it was evident that the fire was not directed purposely against us. Had it been, I think we should have been knocked into a cocked hat without the slightest doubt. Indeed, years later I met in Berlin the officer who had been in charge at this point of action, and he told me that he saw our flag, and avoided as far as possible firing in that direction. This gentleman was a son of that distinguished surgeon, both in military and civil practice, Von Langenbeck.

Well, gentlemen, we had certainly a large number of operations to perform; and operations upon wounds of all kinds. There were fractures of all sorts to treat. Later on we had secondary operations and resections to perform. Opportunities such as these are of course rarely given to any one, and we tried to avail ourselves of the opportunities as far as we could. The operations were performed in accordance with our then recognized best methods, and the results were affected by the demoralized condition of the French troops from defeat in battle. We had, of course, very inadequate nourishment for them, a condition of things which lasted for some time. At first we had an insufficiency of appliances, but this did not last long, for supplies of all kinds soon came pouring in upon us. We had not the advantages of antiseptic surgery, which you at present, and in time of peace possess, and we of course had the sad fortune, in spite of all our efforts, to see patients upon whom we had performed am-

putations, treated compound fractures, or operated even for simple wounds, die one after another, and often from blood-poisoning.

RESECTIONS IN MILITARY SURGERY.

I have said that we came later to perform a certain number of resections, and upon this subject I will make a few remarks. The great Langenbeck, who had greater experience in military surgery than any other surgeon, I believe, says that resections are not satisfactory; that they are very dangerous to life, and certainly the results, so far as function is concerned, are, unfortunately, even less favorable. Many of the resections which I had to perform were upon soldiers sent in later, after the rush, and I may say that very satisfactory results in some instances were obtained. In the second period after the injury, after inflammation has subsided, there are reasons why such operations should be more favorably performed, both as regards use and physiological function. In the first place, in comminuted fracture, we find often, after the second period, that certain of the fragments have recovered themselves; they are not detached sufficiently to lose all vitality, and therefore we are able to ascertain, with greater accuracy than at first, the proper limitation of the operation. We are thus enabled possibly to decide upon a partial operation. I think that the experience of surgeons teaches us that in partial operations we should do just what is sufficient and no more, and that such a course is not only less dangerous to the patient's life, but s also often followed by much more satisfactory results. For at that period the periosteum has become thicker, it has greater vascularity, it is easily detached from the bone, and above all it possesses a greater degree of osteogenetic function; whilst immediately after the injury the periosteum is exceedingly thin, is very difficult to detach, it tears while detaching it, and in addition it possesses very little osteo-genetic power. So these are reasons, I think, which show that excision after gunshot injury of bones can be more safely and more wisely performed at this period than immediately after the receipt of the injury.

I will not weary you with a recitation of cases, but I wish simply to give you an account of one or two which will illustrate the point in question. I need not dwell upon the fact of the greater risk which attends these operations upon the joints, or the reasons why resections are more applicable to the wrist and shoulder than to the ankle and the knee. The knee and hip are least fitted for an operation of this kind, as is shown by the experience of the civil war in this country, and since then by wars in other countries. In the case of the ankle-joint, showing how complete may be the function after shattering and subsequent excision, I will mention the case of a young German officer of noble rank, under the care of Professor Langenbeck. The result of the operation was not only recovery, but such complete reproduction of the parts excised that apparently the limb on one side was as well formed as that on the other. The function was so perfect that the officer was afterward able to walk to the top of Mount Rosa, one of the highest peaks of the Alps, a peak which the larger proportion of you would not care to ascend.

Another case, which came under my own care, I will mention as it is somewhat unique. Ten or eleven days after the battle of which I have been speaking, a French chasseur was carried to the hospital. The man's wounds were very extensive, and were evidence of his great bravery. The entire shoulder and arm were severely injured, the shoulder-joint was opened into in every direction, the deltoid was torn away, the radius and the ulna were implicated, and I was obliged when I saw the man, which was not until suppuration had set in, to resect a portion of the humerus and also of the radius, and about three inches of the ulna. The patient finally recovered after a very severe attack of septic poisoning. I have heard from him once every year since. There was nearly complete reproduction of the shaft of the humerus, four inches of the upper and one inch of the lower portion of which had been excised, besides a considerable portion of the remainder being in a necrosed condition. There was such complete reproduction of the lower end that the condyles are quite perfectly formed. The man is now able to dig with the spade, to roll casks, to do all ordinary work, although he is of course unable to raise the arm perfectly because of the injury done the deltoid. The family physician described the appearance of the parts as apparently entirely normal, and his description was perfectly correct, as I afterward had opportunity to verify.

Speaking of injuries to the upper extremity, I would call attention to the triangular pad invented by Stromeyer, a man of great experience in military surgery, who considered it more useful than any other one instrument or piece of apparatus. By means of this splint any wound of the upper extremity can be treated with the greatest comfort to the patient, and with the greatest prospects of success. It is carried between the arm and the body, and may be used as a splint to bind the parts together in almost any injury of the upper extremity.

AVOID PROBING GUNSHOT WOUNDS.

Another thing which I think I have learned in my experience with gunshot injuries, and one which I should like also to teach you, is to avoid unnecessary probing, or to avoid probing altogether as far as you may. I see from the manner in which you receive this remark that it requires little emphasis from me, but I think it cannot be too strongly stated that the bullet, or what has become of it, is really of secondary importance in the treatment of gunshot injuries. Usually, the first inquiry of the individual wounded is, what has become of the bullet? If it remain in the body, he asks to be relieved of it, and sometimes the surgeon, in his enthusiasm, makes a very considerable effort to fulfil the patient's desire. One instrument after another is introduced, until the end of the list is reached, which is a long one, for every sort of device and appliance has been invented for this purpose. I know by repeated experience how difficult it is to discriminate between a piece of lead or an exposed surface of bone, or even the edge of fascia or a tendon, and if the surgeon fails with the probe, as he often does, one forceps after another is then introduced, and the limb is almost removed piecemeal in the determined efforts to find the foreign body. Septic matter is necessarily introduced with the instruments and the surgeon's finger, and thus a trivial wound may ultimately result, from septic suppuration, in the death of the patient or loss of function of the member. Experience shows us how constantly bullets become impacted or lodged in parts of the body and remain there for years without causing any damage at all. No doubt it is not particularly desirable to have them remain if they can be easily taken away; but what I wish to insist upon is, that there is infinitely more damage capable of being done by the injudicious efforts of the surgeon in trying to remove the bullet than would be done by the presence of half a dozen bullets. In the museum at Washington, and in all museums, there are specimens of bullets lodged in the brain, in the lungs, in bones, etc., in some cases remaining there for years. In the museum at Washington I saw a specimen in which a bullet, entering near the knee, passed into the cartilage of the joint, penetrating almost entirely through it into the joint. The man, at the time of the receipt of this wound, also sustained a wound of the elbow, and he told the surgeon that a bullet had gone into the knee-joint. The surgeon fortunately did not believe him and let the knee alone, and the man lived for years afterward with perfect use of the limb, and at his death the bullet was found in the position mentioned. I might multiply examples going to show that bullets are often not so damaging if left in the

limb, while great damage may result from injudicious attempts to remove them.

PENETRATING GUNSHOT WOUNDS OF JOINTS.

In the Turko-Russian war the advantage of this practice received one of the strongest illustrations possible. A hospital was established in which penetrating wounds of the joints were treated simply by sealing up the wound by some antiseptic method, and by immobilizing the joint completely. I quote from memory, not having the exact statistics at hand, when I say that in twenty-one cases of such wounds there were nineteen which recovered with the use of the limb. These were cases of undoubted penetrating wounds of the joint. If you can give such a series as that as compared with the results of former methods, by which I heard Langenbeck say that he did not believe a single case of penetrating wound of the knee-joint recovered in the whole duration of the Franco-Prussian war, you can see what an amazing stride has been made in the treatment of gunshot wounds. The distinguished surgeon, Stromeyer, states that he never probes or interferes in any way with gunshot fractures of the joint, but does his utmost to treat such cases by rest and antisepsis, and the published results of this method of treating fractures in his hands have been infinitely better than those obtained by any other surgeon. We know how common the opinion had been to consider that gunshot fracture of the femur necessitated amputation; and we now see on the other hand how surprisingly successful have been the results of the later method. I hope, gentlemen, that these remarks may lead you to reflect on the importance of the maxim from which Prof. Esmarch, of Kiel, preaches, which, translated from the Latin, means, do not injure, do not do damage.

GUNSHOT WOUNDS OF THE ABDOMEN.

There is one other subject to which I would like to refer, namely, the question of gunshot wounds of the abdomen. A short time since, my honored friend, Dr. Marion Sims, published some most interesting papers in which he advocated that these injuries should not simply be let alone, but that some effort should be made to save the patients from what would otherwise prove inevitable death. He proposed to open the abdominal cavity, search for the wounded intestine, and either excise or suture it, or treat it in the most appropriate manner, and then to cleanse the cavity and close the wound, and possibly recovery might follow. Now, there is everything in favor of such an attempt, I think. We now make exploratory abdominal operations every day. The abdominal cavity is opened without hesitation, under proper precautions, to see what is the matter inside. I think that almost every viscus of this cavity, except the liver, has been excised more or less successfully, in whole or in part. Part of the stomach, considerable stretches of the intestine, the uterus, etc., have been removed; and you all know with what wonderful success ovarian operations have been performed. Therefore there can be no just cause why such an operation as that suggested should not be performed in these otherwise certainly fatal cases. We know that there are great and various dangers attending the entrance of a bullet into the abdominal cavity; the danger of extravasation of blood, of fecal extravasation, etc., and the cases in which the ball passes through without injuring the intestine can only be very exceptional. Now, when patients have recovered after pouring out of urine into the abdominal cavity, have gone through the dangers of breaking up firm adhesions in the removal of ovarian cysts, etc., should we fold our hands and do nothing in cases of gunshot wounds of the abdomen?

Formerly there were many obstacles in the way of treating gunshot wounds in time of war according to approved antiseptic methods: the clumsiness of the material making it difficult of transportation, the use of the spray being considered a necessity, etc. But now the spray may be dispensed with. We have antiseptic materials, iodoform, for instance, of small bulk compared with their strength, easy of transportation, and ever at hand. Add to these the fact that many wounds which formerly would have called for amputation are now treated by simply sealing them up with an antiseptic and maintaining rest, and I think, gentlemen, you may feel that you have a great future before you in military surgery. This belief is supported by the results achieved in the late war in Egypt. Although there were not a great many wounded during that campaign, yet on one occasion the number accumulated very rapidly, many of the cases calling for amputation. This expedition had gone out with the best possible equipment that money could purchase or experience devise. Every antiseptic most approved of, and every appliance which could be thought of, were at the disposal of our surgeons. The result was, and I speak again from memory, but I think I am correct in saying that out of four hundred and thirty-six wounded men thrown on the hands of our surgeons in a very brief period, there was not a single instance, throughout the entire campaign, of any form whatever of infectious disease; there was no erysipelas, and not a single case of pyæmia.

Gentlemen, after all, what is surgery? It is work for a man's hands, and the old chirurgeon was the tool in the hands of other people. But is that the surgeon of to-day? No. He works with his hands, but he has got to work with his head and with his heart as well. Surgery is a fight with death, in which, unfortunately, the surgeon is often powerless; but never before in the history of surgery have the equipments of the surgeon been more complete, and never before have the victories which he has won been more glorious.

We speak of conservative surgery. I think it is a misapplied term, for is not all surgery conservative? If the surgeon has to amputate a crushed limb or remove a malignant tumor, is not that conservation? Is any surgeon not conservative in surgery? I think the word should be almost banished from our language as applied to this science.

The field of medicine is vast, and our best efforts will prove none too great when devoted to coping with the various human ills to which the different vocations in life expose us. The surgeon who will realize the best results is he who takes on the greater degree of appropriate knowledge and culture. While the field for the future is vast, human intelligence seems capable of growing with the requirements, and I feel assured that, as the surgeon of to-day is better able to grasp with the difficulties which he encounters than the surgeon of the past, so the surgeon of the future will be in advance of his brethren of the present, and his efforts to lessen the amount of human suffering will be crowned with a greater degree of success.

Gentlemen, I have but one word more to say in conclusion, and that is to express how deeply I appreciate the compliment in asking me to address you, and, however unworthily I have fulfilled my part of the undertaking, I thank you for your courtesy in so patiently listening to me. I am now on the point of returning to my own country, and I return carrying with me the happiest recollections. The courtesy and hospitality which have everywhere been shown me I can but regard as a great compliment on the part of the highly cultured portion of this community. In my travels here I have heard expressed but one sentiment toward us, a sentiment of good-will and good feeling, and I assure you that this feeling is reciprocated by us at home.

AN EPIDEMIC OF DIPHTHERIA has appeared in the Blind Asylum at Batavia, N. Y., most of the pupils have been sent away. A large number of deaths from diphtheria have occurred, it is said, in the village, which is wretchedly drained.

Original Articles.

A SIMPLIFIED EVACUATOR FOR THE REMOVAL OF DEBRIS FROM THE BLADDER AFTER LITHOTRITY.

(Read before the New York Academy of Medicine, November 1, 1883.)

BY F. N. OTIS, M.D.,

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THE revolution which has occurred, in the mode of removing stone from the bladder, within the last five years, may now be said to be complete. The new method, first put into practice by Professor Bigelow, of Boston, whereby, as a rule, stones of any size and degree of hardness may be removed at a single sitting, has been formally and explicitly accepted, by the leading authorities, in Europe and America, as an illustrious advance in genito-urinary surgery, and has found successful imitators and enthusiastic advocates in every country. In presenting this new method, at the meeting of the International Medical Congress, held at London, England, in 1881, Dr. Bigelow briefly reviewed the methods previously in use, and as briefly alluded to his own. He said, "From the days of Civiale to the year 1878, there was little change in the operation. The duration of a sitting, was as brief as the skill of the surgeon, stimulated by the fear of producing cystitis, could make it. Three minutes, or less, was the limit inculcated by standard books, and the teaching of specialists, and the use of anæsthesia was exceptional. At present anæsthetics are the rule. The instruments have been already modified, in an important manner, while the sittings often last half an hour, and have been successfully extended to three hours and more." In explaining the manner in which these important changes had been brought about, Professor Bigelow referred to the first instrument devised for the rapid evacuation of stone from the bladder after crushing. This was the invention of Sir Philip Crampton, in 1846. The apparatus consisted of a glass receiver, in form and size like a large soda-water bottle, from which, by means of an exhausting syringe he removed the air, and then applied it to a silver evacuating catheter, previously introduced into the bladder, into the cavity of which some ten or twelve ounces of water had been previously injected. On turning the tap, attached to the receiver, a powerful rush of water and calculous débris, through the catheter, took place. "This," says Sir Henry Thompson, "was found to be dangerously rough in its action and required to be so repeatedly charged that I desisted from its use."

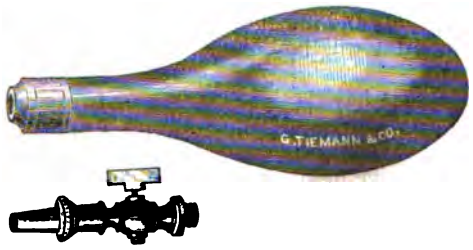

FIG. 1.—Sir Philip Crampton's Evacuator.

This instrument was modified by Mr. Clover, of London, who substituted, for the glass receiver and the exhausting syringe, an india-rubber bottle placed behind a glass receiver. On compression of the elastic bottle, the necessary vacuum was formed, and the débris was deposited gently into the receiver. The first form of the receiver was a simple cylinder of glass, as in the accompanying cut, Fig. 2.

This instrument was subsequently modified by the addition of a vertical glass chamber for the prevention of a return of the débris into the bladder.

Professor Bigelow pays a merited tribute to Mr. Clover, whose instrument for evacuating calculous material from the bladder, after lithotrity, was the only one of practical value previous to his own.

He says, "Had Clover, whose catheter had a calibre of only 21 of the French standard (about 12 English), or Mercier, employed larger catheters (between 25 and 31

FIG. 2.—Mr. Clover's First Evacuator.

French—15 to 20 English) *they might have evacuated the bladder completely!* They would have found how little affected it was by a long operation, if no fragments were left behind, and that polished instruments were not injurious, while sharp fragments were. They would have discovered a tolerance, on the part of the bladder, wholly at variance with the traditions of half a century. Upon this tolerance modern lithotrity is based.

FIG. 3.—Clover's Improved Evacuator. A, india-rubber air-chamber; B, glass receiver; C, tube projecting into receiver; D, junction between evacuating catheter and suction apparatus. Size of evacuating catheter 12—English—equal to 21 mm. in circumference.

"*The new and essential instrument, is the large catheter* (25 to 31), whether straight or curved. *This is indispensable.*" Then follows a description of the evacuator of Professor Bigelow. It will at once be seen that there is an important hiatus, between the old, inefficient instrument of Clover, and "the new and essential instrument" of Bigelow, and that is, an explanation of the reason why the larger instrument was not constructed and used by Clover, and thus have secured, at once, the later advantages of modern lithotrity. In order to complete the history of this important advance in genito-urinary surgery, I may, perhaps, be permitted to state, that it was in consequence of the fact that all anatomical and surgical authorities, previous to the invention of Clover's evacuator, and up to the year 1874, taught that the normal calibre of the urethra did not exceed 21 mm. in circumference. In accordance with that teaching, Mr. Clover *could not use* an evacuating tube of more than 21 mm. in circumference, hence, its capacity for evacuation of calculous débris, was so limited as to render its use of comparatively little value.

After a careful practical study of the dimensions of the urethra, extending over several years, and finally, through the invention of the urethrametre in 1874, I discovered, and was able publicly to demonstrate, an average normal urethral calibre of at least 32 mm. circumference.

Professor Bigelow, in his earliest monograph on "Litholapaxy, or Rapid Lithotrity with Evacuation,"[1] page 11, says: "Whether or not we adopt the view of Otis, that the average capacity of the normal urethra is about thirty-three of Charrière, there can be no question that it will admit a much larger tube than that commonly attached to either Clover's or the French apparatus."

[1] Boston: A. Williams & Co. New York: Wm. Wood & Co. 1878.

While fully accepting the truth of this statement, it seems to me proper to suggest that, it is not a question of "Whether or not we accept the view of Otis," etc. The fact stated, "that there can be no question that the urethra will admit a much larger tube than that commonly attached to either Clover's or the French apparatus, *was not established nor claimed*, prior to my demonstrations in America and Europe in 1874 and 1875."[1]

Dr. Bigelow, in his paper before the International Congress, previously alluded to, thus vigorously states the result of a failure to appreciate the true or normal calibre of the male urethra. There he says: "*The small size of the previous evacuating catheters delayed surgical progress for nearly half a century.*"

By thus explaining why the use of an evacuating tube from 25 to 32 mm. in circumference, was not adopted by Clover and Mercier, the hiatus in the history of this important advance in surgery, previously alluded to, is completely filled.

Professor Bigelow, in his report to the International Congress, modestly disclaimed any credit in the operation, except in the use of the large evacuating tube, and assumed that Clover and Mercier, certainly would have discovered the tolerance on the part of the bladder, upon which he claims "modern lithotrity is based."[2]

It is true, that Professor Bigelow did not discover the tolerance of the bladder to instrumental interference. This was previously well known. On March 3, 1876, and thus over two years previous to the publication of his brochure on "Litholapaxy," I was called upon by Dr. Fred. P. Mann, of Brooklyn, to remove a calculus from the bladder of a lady sixty-four years of age. With the assistance of my associate Dr. Bangs, and Dr. Mann, the urethra, which easily admitted 30 under ether, was dilated up to 45. A forceps was introduced, the stone (a phosphatic one) was crushed, and the débris washed out with Clover's apparatus attached to a 30 silver, open-end, evacuating tube. On subsequently examining the walls of the bladder with the finger, they were found coated with calculous material, which, by the aid of a scoop, my finger, and repeated washings, I was enabled completely to remove. The time, during which the bladder was subjected to this necessary procedure, was just one hour and ten minutes.

FIG. 4. — The French Evacuator. A, the air-chamber; B, the piston worked by rack and pinion.

The patient rallied quickly from the anæsthesia; the operation was not followed by the slightest constitutional disturbance, and she made a perfect recovery, and is at the present writing alive and in good health.

November 6, 1877, I was called to Sag Harbor to see a case of supposed urethral stricture with ulceration of the bladder. The patient had been confined to his bed for more than a year. On examination, I found a stone in the bladder, and operating by Dolbeau's method I passed a forceps through the perineal opening, crushed and removed a calculus, the débris of which, filled a large goblet. The calculus was so large, that I was nearly an hour in crushing off the sides of the stone, before it could be brought fairly within the jaws of the forceps. After this, the operation was speedily finished, but, with the necessary instrumental interference within the bladder, and the subsequent manipulations for cleansing it, from the commencement of the crushing, to complete evacuation, the time was an hour and a quarter. No local trouble resulted from this prolonged operative interference within the bladder. The patient made a perfectly satisfactory recovery under the care of Dr. Rodgers, of Sag Harbor.

I am sure that many surgeons have experiences, practically equivalent to the foregoing, antedating the operation of litholapaxy by many years. And thus I claim, that Professor Bigelow did not *discover* the tolerance of the human bladder to prolonged instrumental interference. He did much more—he utilized the knowledge which he in common with other surgeons possessed. He had the inspiration to conceive of its value as a factor in a great life-saving operation. He seized the demonstration of an average urethral calibre of 32 mm. in circumference. He joined it with his knowledge of the toleration of the bladder to legitimate surgical procedures, and *litholapaxy* was born. He had the courage, the surgical knowledge, the skill, the inventive mechanical genius, and the perseverance to carry it, *vi et armis*, to a successful maturity, *thus finally achieving one of the most brilliant surgical triumphs of modern times.*

The size of the evacuating tube has been shown by Professor Bigelow to be the most important factor in the operation of litholapaxy. The smallest calibre to be really efficient and satisfactory may be fixed at 27 F., and the largest affording all desirable facility in evacuating the débris may be fixed at 32 F., which is less than the average normal calibre of the urethra by over one millimetre.

In a normal urethra, that is to say, one free from localized contractions or obstructions, it may be assumed that an evacuating tube of proper shape and corresponding size may, as a rule, be easily and safely passed through it, into the bladder. The normal calibre of any urethra may, in all cases, be safely assumed, from a measurement of the circumference of the penis.

After a careful experience on this point, in many hundred instances, I do not hesitate to claim, that the relation of the size of the urethra to the size of the penis, in any given case, is invariable, and that any variation from it is abnormal. I have never yet met with a single case, where the estimate of the calibre of a urethra, based upon this proportionate relation, has proved excessive.

This relation was formulated by me, in a table presented to the profession in 1875, as follows:

CIRCUMFERENCE MIDWAY OF THE PENIS.

Of Penis.	Of Urethra.
3 inches, or 75 mm.	30 mm., or more.
3¼ " " 81 mm.	32 mm., "
3½ " " 87 mm.	34 mm., "
3¾ " " 93 mm.	36 mm., "
4 " " 100 mm.	38 mm., "
4¼ to 4½ " 105 to 112 mm.	40 mm., "

Now, while I have seen many cases, where the urethra was larger than that claimed in the foregoing table, I have never seen a single case where it was less. Whenever a full-sized instrument, selected in accordance with the proportionate relation, above claimed, did not easily traverse the urethra, then, the failure was always shown to be due, to localized contractions, either at the meatus, as the result of malformation, or pathological causes, or from easily recognized stricture at some deeper point in the canal. Obstructions resulting from prostatic enlargement should always be respected, and in such cases *the smallest tube which will be efficient in removiug the débris* should be used. This, because all forcible interference with the parts thus diseased, is to be avoided as much as is possible. All localized contractions of the urethra, should be removed before the operation of litholapaxy. Contractions at the meatus, should be divided, and allowed to heal, before operation for litholapaxy. The chief dangers of litholapaxy, reside in the injuries to the deep urethra, during the operation—hence the urethra should be put in the best possible condition, throughout, before the operation is attempted. Time should always be allowed for complete healing of the wounds resulting from preliminary division of the meatus,

[1] See Otis on Stricture of the Male Urethra. Second Edition, pp. 25, 72, 89, 97, 183 et seq. New York: Putnam's Sons, 1880. And a Table of Measurements of One Hundred Supposed Normal Urethræ, p. 200 et seq. 1875.
[2] Trans. Int. Cong., vol. ii., p. 293.

or of deeper contractions, before the operation of litholapaxy is attempted. In this way any hemorrhage, resulting during the operation, will be referred to its real cause, and the operator will be relieved from the embarrassment of a hemorrhage from the urethra, resulting from division of the meatus, or deeper stricture, at the time of operation, which could not then be quickly differentiated from hemorrhage produced by injury of the bladder, in the process of crushing. Civiale was in the habit of dividing the meatus and allowing the wound to heal, before attempting the operation of crushing the stone. In this way he discovered that many reflex irritations, simulating stone in the bladder, were due to the contraction of the meatus alone. Having, then, thoroughly cleared the urethra from all localized contractions, the operation of litholapaxy may be approached, with the greatest security against embarrassment from mechanical obstruction in the urethra.

The facility, and safety, with which the operation of removing the débris from the bladder, in litholapaxy, depends, in a very important degree, on the size and shape of the evacuating tube or catheter. Professor Bigelow recommends that the size shall not be below 25 mm. in circumference, nor above 31 mm. For my own part I have never yet met with a normal adult urethra of less than 28 mm. in circumference. Whenever, therefore, the urethra will not admit an evacuating tube of 26 or 27 mm. in circumference I do not hesitate to claim that stricture is present, either at the meatus, or at some deeper point, and, after verifying this claim by examination, to recommend restoration of the canal, by removal of the contractions by dilatation or by division, before operating, rather than to use an evacuating tube of a smaller size.

The difference of even 2 or 3 mm. in the size of an evacuating tube, when below 30 mm. in circumference, makes an astonishing difference in its evacuating capacity. For instance, in using the evacuating tube 30 mm. in circumference, twenty pressures of the bulb, at intervals of one and a half second, withdrew from the glass bottle (representing the bladder) and deposited in the receiver, 300 grains of crushed coral, which is almost identical in weight and mode of cleavage with mixed calculi. Whereas, under the same circumstances, with the same number of pressures of the bulb, and in exactly the same time, with an evacuating tube of 27 mm. circumference only 180 grains were deposited in the receiver. It may, I think, be confidently stated that in the absence of stricture, or congenital contraction of the meatus, or of prostatic enlargement, an evacuating tube, two or three sizes smaller than the normal urethra, according to estimate previously stated, may, as a rule, be easily and safely used.

Professor Bigelow uses, and recommends, the straight evacuating tube, in preference to the curved. The calculous débris finds its way through it, much more directly and easily, and while less liable to become clogged, it is more readily cleared. The only objection appears to be, the somewhat greater difficulty of introducing it into the bladder, especially in cases of enlargement of the prostate. I have modified the straight instrument of Professor Bigelow, by adding a small curved projection, which, with all the advantages of the former, I have found more easy of introduction, and preventing, in greater degree, the closure of the opening in the tube, from engagement of mucous membrane in it, during the process of evacuation. (See evacuating tubes in Fig. 12.)

Notwithstanding the statement of Professor Bigelow, already quoted, to the contrary, *something more than a large evacuating tube* was essential to the new operation. This was a more powerful evacuating apparatus than that of either Clover or Mercier. This lack was supplied by Professer Bigelow—thus finally enabling him to perfect his operation of "*rapid lithotrity with evacuation.*"

His first apparatus consisted, simply, in a large, strong, india-rubber bulb, furnished with a glass receiver for the débris, and a tube at the opposite extremity for attachment to the evacuating tube. (See Fig. 5.)

This instrument was found perfectly efficient and came into general use, although it was open to the objection that fragments and débris, having been once withdrawn from the bladder, were again carried back into it by the return current. There was also the real, or theoretical, complaint, that, during its use, it permitted too free access of air into the bladder.

Sir Henry Thompson, of London, who was quick to recognize the great improvement of Bigelow's method over those previously followed, adopted Bigelow's procedure, and produced, in 1879, an evacuating apparatus differing from that of Professor Bigelow, in that the débris fell from the evacuating tube, directly into the receiver or trap, and that the connection of the tube with the bulb, was rigid and metallic, instead of by rubber tubing, and was filled, previous to use, through a funnel and stop-cock at its apex, instead of through the tubing. (See Fig. 6.) Efficient in Sir Henry's hands, it was exposed to the same objections that had been raised against Professor Bigelow's instrument. In 1880, in the third edition of his work on "Practical Lith-

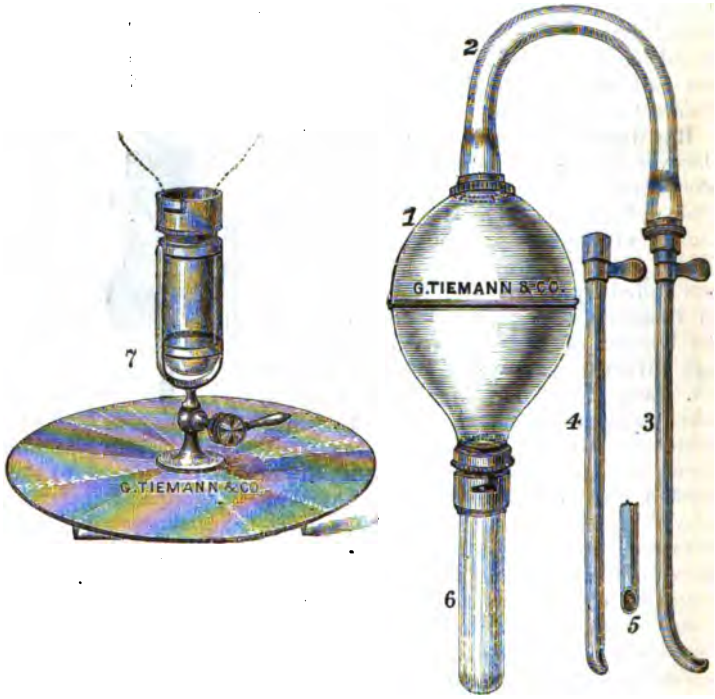

FIG. 5.—Professor Bigelow's Original Evacuator. 1, elastic bulb; 2, curved rubber tube; 3, curved evacuating tube of silver; 4, straight evacuating tube, which is preferable to the curved one; 5, front view of same; 6, glass receptacle with bayonet-joint for débris; 7, stand. (Tiemann & Co., New York.)

otomy and Lithotrity," page 186 (J. & A. Churchill, London), he presented the following modification of the apparatus (see Fig. 7), the advantages of which he claims are, that "the change in the position of the lower tap shortens the distance for the fragments to traverse, which thus reach the receiver by the shortest possible route. The current having less distance to travel, has thus more powerful action on the fragments, and consequently the aspiration is more perfectly made than it has hitherto been. The fragments enter, fall downward through the tube, *and cannot mount again into the apparatus*, in consequence of the projection of the tube into the glass receiver." He also says, "for those who prefer a portion of flexible tube between the aspirator and the evacuating catheter[1] two inches thus interposed will insure freedom from any jar to the bladder in using the instrument, and will only lengthen the route *pro tanto*." "For myself," he concludes, "I prefer the absolutely direct and short-

[1] As in Professor Bigelow's original evacuator.

est route, having no more fear of hurting the bladder, with the inflexible evacuating catheter, than I have with the inflexible lithotrite."

Up to this point the evacuator of the great English lithotritist, appeared to possess the advantage over his American rival, in the more direct route for the débris, while the greater freedom from angles on this route (see Fig. 5, page 482) seemed to promise at least equal efficiency for the latter.

Practically I had made use of Professor Bigelow's original instrument from an early date, with complete success in every instance, and without finding anything in its working, which appeared to decrease its efficiency, in any marked degree. Of it, as late as April, 1883, Mr. Harrison, of Liverpool, in his valuable brochure on lithotomy, lithotrity, etc., writes of Professor Bigelow's evacuator thus: "After trying several modifications of it, I must express my satisfaction, so far, *with the original instrument*" (represented at page 482). He further says: "Exception has been taken to it on the grounds (1) that the trapping of the fragments is imperfect, (2) that the apparatus permits air to enter the bladder." Admitting the truth of these objections to some extent, he says: "I am not disposed to think that the utility of the instrument is thereby seriously impaired."

Professor Bigelow, nevertheless, began a series of experiments, with the view of increasing the excellence of his evacuator, addressed not only to excluding the air from it, during operation, but in preventing the débris from re-entering the bladder by the return current.[1]

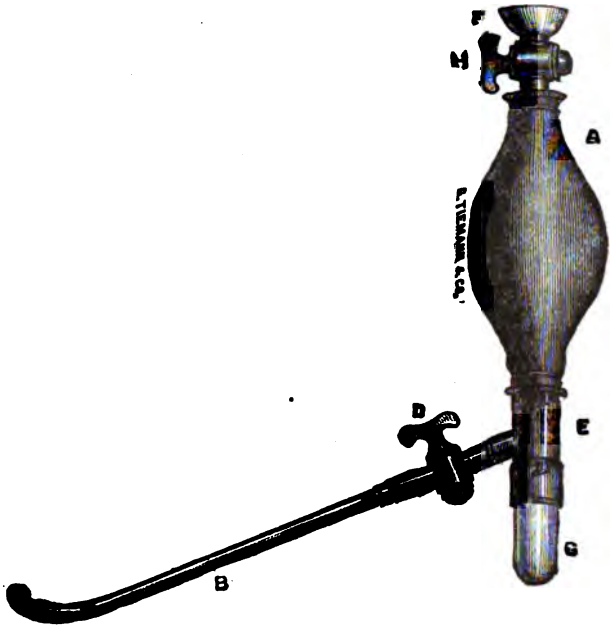

FIG. 6.—Sir Henry Thompson's Original Evacuator.

FIG. 7.—Sir Henry Thompson's Improved Evacuator, showing the mechanism of the taps *through* which the débris passes to the glass receiver.

In the improved instrument (see Fig. 8), heavy stop-cocks at DD, one attached to the evacuating tube and the other to that in connection with the bulb, and subsequently a catheter valve or strainer was interposed between the latter stop-cock and the bulb; also a tube F, guarded by a stop-cock at G, for refilling the bulb, if necessary, without withdrawing the evacuating catheter from the bladder.

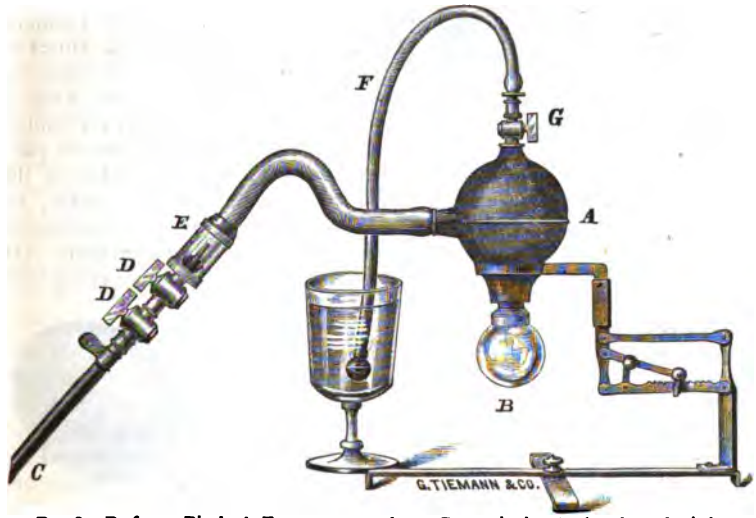

FIG. 8.—Professor Bigelow's Evacuator, complete. Curves in the elastic tube make it less liable to flatten when bent. The hose is attached when it is needed. (From Bigelow, op. cit., page 297.)

FIG. 9.—The "Simplified Evacuator" and Stand. The catheter is prolonged, by a long tubular strainer, into the bulb. This makes a catheter-valve, though still advantageous, less necessary. An elastic ball or universal joint, with a small tubular strainer, is also substituted at the head of the catheter for the elastic tube, and makes the instrument shorter. The stand is here a retort-stand. The bulb hangs firmly in a fork, and can be variously inclined.

This was subsequently modified by transferring the strainer to the body of the bulb and dispensing with the ball valve, as in Fig. 9.

In this, the route for débris is much shortened by the substitution of a universal joint in place of the tubing, and entering the bulb at its centre, instead of at its

[1] Transactions of the International Medical Congress, 1881, vol. ii., p. 293.

apex—on all these points more nearly approaching the evacuator of Sir Henry Thompson. The instrument, however, although more perfect in its working, was more complicated and expensive. Probably for this reason Professor Bigelow continued his efforts for a perfect and

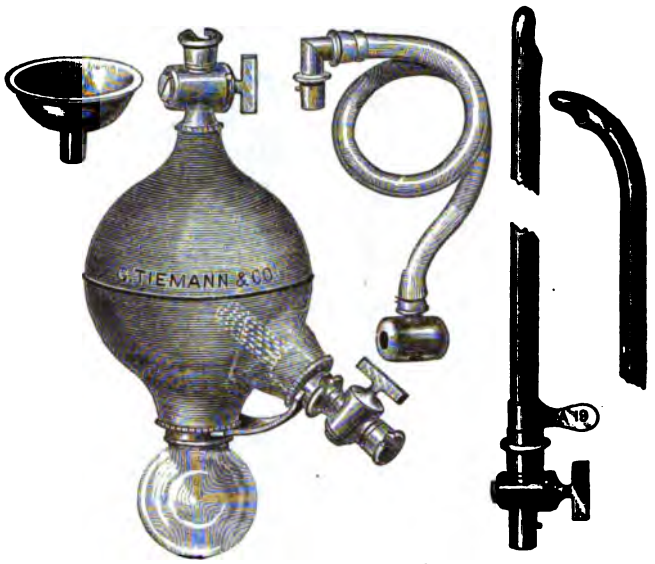

FIG. 10.—Professor Bigelow's Evacuator, improved 1883.

more simple apparatus. These were signally successful, resulting, during the early part of the present year, in the instrument represented in the above sketch.

In this the route for the débris is again greatly shortened.

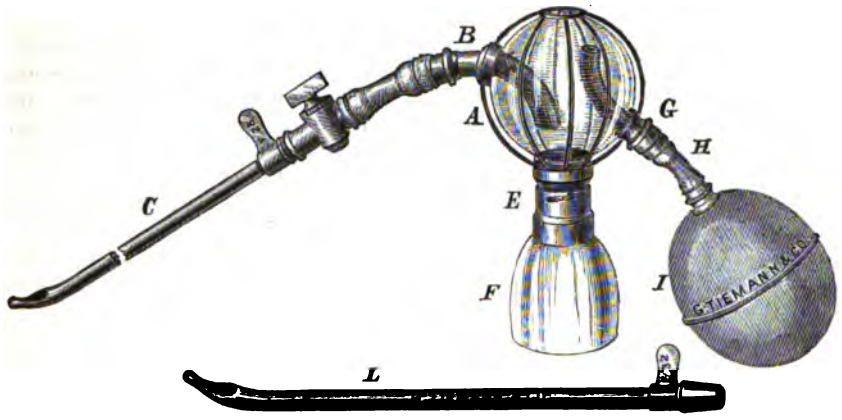

FIG. 12.—The Author's Simplified Evacuator.

The return of débris to the bladder, is prevented by the strainer, which is here prolonged into the bulb at an acute angle. The movable joint is dispensed with, and probably, for the reasons given by Sir Henry Thompson on page 482, the connection with the bulb, is without an intervening flexible tube. I have used this on a single occasion, and its operation was perfect. I felt satisfied that for this form of instrument it was the most simple, direct, and efficient in action of any that had been devised.

In the meantime, Sir Henry Thompson's improved evacuator, had been modified, at the suggestion of Messrs. Weiss & Son, surgical cutlers, of London, in order to carry out more perfectly one of the conditions for a perfect evacuator previously insisted on by Sir Henry Thompson, viz., to secure the shortest possible route for the passage of débris from the bladder to the receiver. This modification is shown in the appended woodcut (Fig. 11).

"This," says Sir Henry, "is identical with Fig. 4 (as represented in Fig. 7 on previous page) in every particular, except that the cylindrical receiver which is in Fig. 4 (Fig. 7, previous page) directly under the bottle, and may be influenced by currents, is removed to the front of it, and is perhaps less disturbed by the current which passes over the mouth of the receiver. . . . . In neither Fig. 4 (Fig. 7, previous page) nor Fig. 5

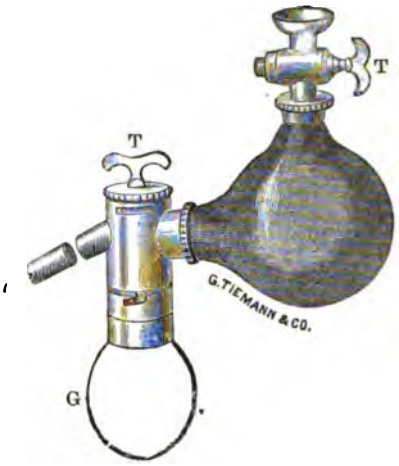

FIG. 11.—Sir Henry Thompson's latest Evacuator, modified by Weiss.

(Fig. 11, above shown) is any stand required, and the connection with the bladder, is the shortest and simplest possible." The connection of the aspirator with the bladder, is also cut off in both instruments by the taps T T.

Notwithstanding their excellence in other respects, the weight and size of the different evacuators had often occurred to me as an objection, as well as their necessary expense, a good modern instrument costing about thirty dollars. After a careful experimental study of the matter, bearing in mind the excellent points of all the instruments in use for this purpose, the plan of a new instrument was evolved by me, and elaborated by the surgical cutlers, Messrs. George Tiemann & Co. It consists of a strong annealed glass bulb, A, two inches in diameter, the reservoir, into one side of which a metal tube, B, forty mm. in circumference, curving down to its lowest part, is inserted. This is connected to the evacuating catheter C by the india-rubber tube; attached to the floor of the reservoir by a bayonet-joint, E, is a short, strong, glass bottle, F, the receiver. On the side of the bulb, opposite the tube connecting with

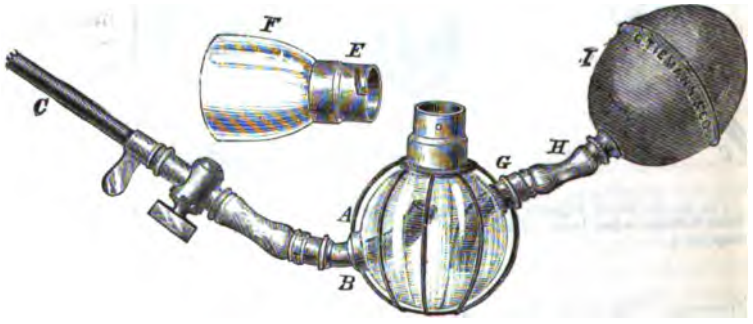

FIG. 13.—The same reversed for filling.

the evacuating catheter, is another metal tube (at G) curving upward to near the top of the bulb A. This is connected by another flexible tube, H, with a strong india-rubber bulb, I, constituting an independent air-chamber. A stop-cock at the extremity of the flexible

tube permits the removal of the catheter without leakage from the reservoir A. The capacity of the reservoir A is just four fluid ounces, that of the receiver F one and one half ounce. To put the instrument in operation it is necessary, first, to shut the stop-cock, then disconnecting the receiver F from the reservoir A, and reversing the latter, so that its opening looks directly upward, with a small pitcher, or cup, fill it with water to the brim, requiring just two ounces.

Then, with the reservoir still in the same position, attach the receiver F (see Fig. 13). Return the instrument to its upright position and it is ready to be attached to the evacuating catheter, previously introduced into the bladder. Or the instrument, in the position shown, may be emptied of the contained air by firm compression of the bulb I, and the evacuating catheter placed in a vessel containing sufficient water, when by removing the pressure the instrument fills instantly and is then ready for use.

Directions for operating, the reservoir having been filled as above shown.—The evacuating catheter having been well oiled and carefully introduced into the bladder, the contained urine is evacuated and six to eight ounces of tepid water are introduced into the bladder. The evacuating catheter is then attached to the evacuator. Gentle pressure of the bulb—sufficient to displace one-third to one-half its contained air—drives a current of water into the bladder and produces the necessary vacuum. The returning current from the bladder brings a portion of its contained water, and with it the calculous débris. This is quietly, quickly, and certainly deposited into the receiver, from which there is no possibility of return into the bladder. Repeating the pressure on the bulb at intervals of two or three seconds, as long as the fragments are seen to fall into the receiver, the catheter, the point of which has been in contact with the most dependent portion of the bladder, is then withdrawn a little and gently moved about, in order that floating or reluctant fragments may find access to it, and the rhythmic pressure of the bulb is continued until no more débris is seen to fall into the receiver.

If, then, there are evidences that calculous material still remains in the bladder after removal of the evacuating catheter the crushing is renewed, after which the same operation for removal of the débris is repeated, and so on until the stone is completely removed.

In order to show how completely the débris is removed from the influence of the current which returns to the bladder, a colored solution may be placed in a bottle, the receiver filled to the brim with pure water or glycerine, and attached to the reservoir. Pressure of the bulb drives the colored solution into the reservoir without materially coloring the water in the receiver, thus showing that the current is between the mouth of the evacuating tube emptying into the reservoir, and that of the independent air-chamber, placing the receiver out of the influence of the current; consequently the débris drops quietly into the receiver and is there retained.

A Medical Hero.—Says Dr. Parvin: How many a surgeon, after performing tracheotomy in a case of diphtheria, has found the tube obstructed, his patient in peril of instant death, and has applied his mouth to the tube and removed the obstruction, saving his patient, it may be, but killing himself! When the Alabama was hopelessly disabled by the well-directed shots of the Kearsarge, the gallant surgeon, Lewellyn, got his wounded men in the only two boats left, but, though urged, refused to enter either of them, lest, by overloading, the safety of his patients might be imperilled, and went down with the ill-fated ship to sudden death, but to an immortal memory.

Digitalin causes a decrease in the total work of the heart (of frogs and turtles), according to Messrs. Donaldson and Stevens.

THE ARCHITECTURE AND FUNCTIONS OF THE CEREBELLUM.[1]

By AMBROSE L. RANNEY, M.D.,
New York.

(Continued from p. 452.)

If you study the *fourth ventricle*, the exposed portion of this tract will be seen to constitute the lateral boundary walls of that cavity (*processus e cerebello ad testes*), with the so-called "valve of Vieussens" (*velum medullary anterius*) enclosed between them. The latter formation deserves special notice in this connection.

The processus cerebelli ad cerebrum itself is by no means free from admixture of foreign elements during its passage from the cerebrum to the cerebellum, the details of which I have just given. At the level of origin of the fifth cranial nerve (trigeminus) fibres from the cerebellum to the greater root of that nerve can be demonstrated as fasciculi which in part cover it and in part traverse it. It is also traversed, at a lower plane, by fasciculi destined to belong to the eighth cranial nerve (auditory).

Valve of Vieussens.—In this commissural band (the medullary velum) three different systems of fibres lie interwoven: 1. The great mass of its substance is composed of bundles of fibres derived from the frenulum. 2. The decussating fibres of the fourth cranial nerve (trochlearis), which are grouped at the anterior extremity of the valve into bundles of extreme thickness, are intertwined transversely with the fasciculi of the frenulum. 3. Certain longitudinal fibres may be demonstrated which can be traced to the superior vermiform process of the cerebellum. The course of these fibres is peculiar. They decussate before leaving the superior vermiform process; they then traverse the valve of Vieussens almost to the lower border of the corpus quadrigeminum; at this point, they double upon themselves, describing curves whose convexity looks upward; finally, they join the inferior lamina of the lemniscus at its posterior bundle, and pass onward with the latter, in the posterior division of the pons Varolii, to the spinal cord.

Processus cerebelli ad pontem (*middle peduncle of cerebellum*).—When the general architecture of the cerebro-spinal axis was under consideration,[2] the relation of the cerebellum to certain fibres which helped to form the "basis cruris" of Meynert (*crusta cruris*) was touched upon, as an anatomical explanation of the fact that the number of fibres of the middle projection system suffered an apparent decrease during their passage through the pons Varolii. It was then stated that some of the efferent fibres of the corpus striatum probably left the direct tract of the projection system within the region of the pons, and passed to the cerebellum. Some points pertaining to the physiological importance of these fibres were also mentioned in connection with my description of the corpus striatum. It has, moreover, been stated, in previous lectures, that the region of the pons contained certain *transverse fibres* connected with the cerebellum, which interlaced with the fibres of the cerebral projection tracts, and were probably more or less intimately associated with the nodal masses of gray matter found in that region. Some of these fibres are unquestionably commissural in character, serving to unite homologous regions of the cerebellar hemispheres; others probably serve to unite the hemispheres of the cerebellum with the gray matter of the crus of the opposite side. In man the pons is long, because the crusta cruris is developed in proportion to the size of the cerebral lobes; in animals it becomes shorter in proportion to the decrease in size of the cerebrum. The interlacement of the fibres of the projection system with those of the "processus cerebelli ad pontem" occupies the region of the pons and the upper half of the medulla (Meynert). It is somewhat curious to observe that the lateral regions of the cerebellum keep pace

[1] A part of a course of lectures delivered before the students of the University of the City of New York.

[2] See article by the author in the New York Medical Journal, April, 1883.

in their development with the cerebral lobes, and the "*nucleus dentatus*" of the cerebellum is developed in direct proportion to that of the olivary bodies of the medulla oblongata.

Cross sections of the region of the pons reveal the fact that the transverse fibres of the processus cerebelli ad pontem may be divided into *three sets*, as follows: 1, a superficial layer; 2, fibres which interlace with longitudinal fibres escaping from the crus; 3, a deep-seated layer. The superficial and deep layers appear to be perfectly independent of any association with the fibres which belong to the middle projection system of the cerebrum (those of the crusta and tegmentum cruris). Meynert, however, brings forward certain reasons, based upon a minute study of the general relations of these layers, which apparently lend support to the view that the fibres of these strata are in communication with nerve-cells embedded in the pons, that certain crural fibres are likewise joined to these cells, and that the two sets of fibres are thus brought into communication with each other. He states his conclusion as follows:

"Each fasciculus of the basis cruris cerebri that terminates in either side of the anterior division of the pons is represented in the *cerebellar hemisphere of the opposite side* by *two fasciculi*, one of which runs with the superficial, the other with the deep stratum of the transverse system of fibres from the point of their connection with the crural fasciculus into the processus cerebelli ad pontem of the opposite side."

Processus cerebelli ad medullam (*restiform body, inferior peduncle of the cerebellum*).—A complete description of this important bundle properly belongs to a subsequent article, which shall treat of the architecture of the medulla oblongata. It is a round and prominent cord, which passes directly into the corresponding hemisphere of the cerebellum. The fibres of the lateral cerebellar tract and the arched fibres of the medulla oblongata can positively be traced from it to the substance of the cerebellum. The distribution of some other bundles found within it is still unsettled. The fibres of the restiform body probably terminate either in the corpus dentatum or the cortex of the posterior surface of the hemisphere.

Relations of the cerebellum to cranial nerves.—At various times, articles have appeared which tend to show that the fibres of origin of some of the cranial nerves can be traced to the cerebellum. When a positive demonstration of the statements made by some of the later anatomists can be furnished, much light will be shed upon the functions of this ganglion. There seems to be every reason, at present, to believe that the *auditory nerve* can be traced to the cerebellum after its fibres have passed through the auditory nucleus; and the number of such fibres appears to be in excess of those actually comprised within the nerve itself. In this respect a strong analogy is presented between the auditory fibres and those of the corona radiata of the cerebrum, which are themselves more numerous than those of the crus, although they appear to be a direct continuation of them (as was stated when the basal ganglia of the cerebrum were under consideration). The opinion advanced by Spitzka, that the fibres of the sensory root of the *trigeminus* can be also traced to the cerebellum, lacks positive confirmation as yet; and the same remark might apply with equal justness to the views of those observers who believe that the *third*, *fourth*, and *tenth cranial nerves* have a direct association with that ganglion. There are physiological experiments on record which seem to sustain all of these views as well as others which combat them. These will be explained later. The proof, however, that fibres of the nerves mentioned can be actually demonstrated within the substance of the cerebellum, cannot, to my mind, be considered as final, although some neurologists are inclining more strongly of late toward that belief.

The functions of the cerebellum.—From the date of Flourens' first experiments upon the cerebellum of animals down to the present time, neither sensibility nor marked excitability seems to have been demonstrated as attributes of this ganglion. Animals which have suffered extreme mutilation of the cerebellum experience no apparent pain, nor does direct irritation of that ganglion result in pain or convulsive movements. The opinion that the cerebellum is incapable of direct stimulation, which is still held by some physiologists, seems to be confuted, however, by the experiments of Budge, who observed that movements of the testicle and vas deferens occurred in the male, and of the horn of the uterus and the Fallopian tubes in the female, when direct irritation of the cerebellum was employed. The same observer produced movements in the stomach and œsophagus by means of cerebellar stimulation.

The widest differences in opinion exist among physiologists and neurologists regarding the functions of this ganglion, since the most positive and direct results of experimentation upon animals are apparently contradicted by pathological observations upon the human subject. There is one conclusion, however, in which most physiological observers, since the date of Flourens' original experiments, concur, viz., that the cerebellum, in some way, influences to a marked degree the *co-ordination of muscular movements*. This is very apparent in birds deprived of the cerebellum in whole or in part; since the power of performing definite and regular acts of locomotion is lost, although the animal is not paralyzed. If laid upon the back, the bird cannot recover itself, in spite of exhausting efforts to do so. If placed upon the feet, it executes sudden and disordered movements, and shows an agitation which is in marked contrast to the stupor which follows a removal of the cerebral lobes; it can still see and hear, feel pain, exhibit evidences of volition in its endeavors to avoid a threatening blow, and apparently it possesses normal intellectual faculties. Life is not particularly endangered by these experiments, as some of Flourens' birds lived several months, although severe hemorrhage and injury to the medulla may sometimes occur in performing them. If only portions of the cerebellum are removed, the animal appears to *slowly regain* its power of co-ordination of muscular movement; this fact may tend to explain the absence of marked symptoms in the human subject, in spite of extensive lesions.

When Andral published a collection of ninety-three cases in which well-marked lesions of the cerebellum were found after death, and announced that only one sustained the view that the cerebellum governed co-ordination of movement, physiologists were startled and made to doubt the positiveness of their own conclusions. These cases were, however, carefully analyzed by Flint, who entered into a lengthy argument to prove that the cases cited did not warrant the conclusion of their compiler. Nothnagel published in 1878 the results of his analysis of more than two hundred and fifty cases of cerebellar disease. He is inclined to admit the existence of cerebellar ataxia (which he describes as a perversion of equilibrium resembling alcoholic intoxication) as characteristic of cerebellar disease, but he thinks that the *superior vermiform process* is especially liable to produce it, if extensively affected. In the majority of instances the upper extremities remain free from incoordination. Subjects in whom cerebellar ataxia is well marked stand, as a rule, with their feet well apart, in order, as it were, to increase their base of support; they sway from side to side and titubate; the toes are seen to be in active motion if the patient stands barefooted; in walking, the body sways and the heel and ball of the foot are brought into contact with the ground irregularly; the ataxic symptoms may and may not be increased by closing the eyes; in the recumbent posture all these ataxic manifestations entirely disappear.

The tentorium cerebelli, which serves to separate the cerebellum from the posterior cerebral lobes, and which in some animals is a partition of bone, appears to have

a clinical bearing upon the development of lesions of the cerebellum, since it seems to favor their growth in a forward and downward direction. It is important for you to bear this in mind when the effects of local destruction of this ganglion are under consideration, as well as the fact that an experimental or pathological lesion seldom, if ever, involves all the numerous nerve-tracts and centres which exist within this ganglion, but have different peripheral connections.

By recalling the important connections of the cerebellum with other parts of the brain and the spinal nerve-tracts, by means of its three crura, and bearing in mind also that the third, fourth, fifth, acoustic, and pneumogastric nerves may possibly have direct sources of origin within its substance (the proof of a relation with all of which, however, is still somewhat unsatisfactory [1]), you can readily understand that the symptomatology of cerebellar lesions must, of necessity, be peculiarly involved and complex. The important organs which underlie the cerebellum (the corpora quadrigemina, the tegmentum cruris, and the medulla oblongata) are liable, furthermore, to be simultaneously affected, either by pressure or the extension of the disease to these parts. Within the first of these we probably have centres which govern the movements of the eyeball (Adamuck), and some decussating fibres of the nerve of sight (Charcot); in the second, a vasomotor centre, and possibly one which presides over convulsive movements (?) are believed by some authorities to exist; in the third we find the olivary bodies, which are connected with the cerebellum, and the various nuclei of origin of important cranial nerves.

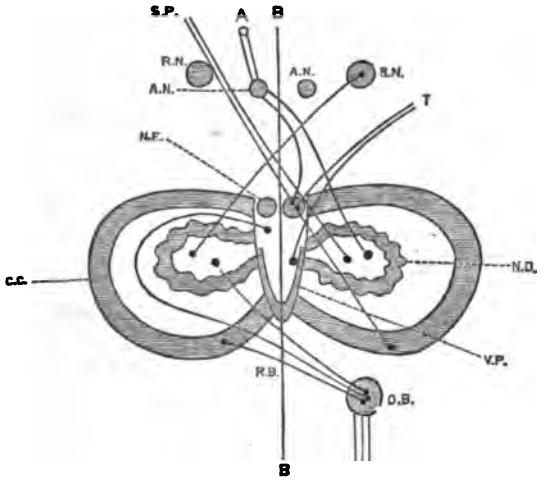

FIG. 3.—A Diagram Designed to Show the Probable Connections of Certain Nerve-Tracts with the Different Portions of the Cerebellum.—B–B, the mesial line of the cerebellum; N.F., nucleus fastigii, situated in the worm N.D., nucleus dentatum, situated in the hemisphere; C.C., cerebellar cortex, covering the peripheral parts of the hemisphere; A.N., auditory nucleus, connected with the auditory nerve (A), and also with fibres which decussate and pass backward to become united with the nucleus fastigii and the nucleus dentatum; R.N., red nucleus of the tegmentum, connected with fibres springing from the dentate nucleus; S.P., fibres of the superior cerebellar peduncle, springing from the dentate nucleus and the cerebellar cortex, and decussating before they reach the region of the red nucleus of the opposite side; V.P., vermiform process (worm), which contains the nucleus fastigii of either side within its substance, and gives origin to fibres of the trapezium from within its white or medullary substance; O.B., olivary body of one side of the medulla, connected with fibres passing to the dentate nucleus and cerebellar cortex; T, fibres of the trapezium, springing from the medulla and connected with the nucleus fastigii and the medullary substance of the worm; R.B., fibres of the restiform body (inferior peduncle of the cerebellum), connected with the olivary body and also with the cerebellar cortex, the dentate nucleus of the opposite side and the worm.

We are apparently justified, on anatomical grounds, in attributing the affections of *sight* which are so often observed in connection with lesions of the cerebellum to pressure upon the geniculate bodies, the corpora quadrigemina, or the fibres or nuclei of origin of the third, fourth, or sixth nerves. On similar grounds, the attacks of *nausea*, *vomiting*, *cardiac disturbances*, and *sudden death* may be attributed to the pressure of cerebellar lesions upon the nuclei of origin of the vagus nerve within the floor of the fourth ventricle, resulting in either irritation or complete paralysis of that nerve. The *convulsive attacks*, which are occasionally observed in connection with cerebellar lesions, may perhaps be explained by pressure upon the convulsive centre of the tegmentum cruris; and the development of *hemiplegia* of an imperfect type, or of *general paralysis*, both of which have been reported as occurring from cerebellar disease, may be explained by a similar effect upon the direct motor tract of the cerebral projection system.

In direct antagonism to the results of Flourens' experiments, lesions of the cerebellum of the human race seem to be often associated with pain which predominates in the occipital region. In fact, the diagnosis of cerebellar disease is made chiefly on the predominant occipital pain (Brown-Séquard), with titubation and other peculiarities observed during the erect attitude of the patient. Exclusion of disease in adjoining regions must, however, always be made by the absence of symptoms before making a positive diagnosis; because occipital pain and titubation may both be often wanting, and the so-called "ataxic symptoms," when present, do not exist in the marked degree commonly met with in posterior spinal sclerosis. It is uncommon to find true ataxic jerking; and choreic movements and tremor are usually absent. The want of harmony between antagonistic groups of muscles is also wanting.

An attempt has been made to connect the cerebellum with the generative function, but physiological experiment has apparently demonstrated its fallacy. A rooster, in whom the cerebellum had been removed, attempted to mount a hen eight months afterward, and failed apparently only on account of the lack of power to co-ordinate his muscles (Flourens). There seems to be no well-authenticated instance where the sexual instinct has been destroyed in animals by removal of the cerebellum. Leuret found that the cerebellum was even larger in geldings than in stallions or mares. Among the numerous cases of disease of this ganglion to which we have referred, some suffered from a marked excitation of the sexual apparatus, while others had a well-marked atrophy of the genital organs and impotency. There are many physiological as well as pathological facts which tend to refute the idea that the cerebellum is the seat of sexual instinct, and to locate it in the lumbar region of the spinal cord; still it cannot be denied that numerous cases, on the other hand, seem to point to some connection between the cerebellum and that centre, or the organs of generation, in the human subject.

When the corpus striatum was discussed,[1] it was stated that the superior peduncles of the cerebellum could be traced to the so-called "yellow nucleus" of the caudate portion of that ganglion. Luys considers that by means of these fibres the cerebellum is enabled to constantly reinforce the cells of the corpus striatum when they become exhausted, thus enabling them to exert their modifying effects upon all the motor impulses arising in the cerebral cortex which are forced to pass through them, as well as to manifest a peculiar automatism which the cells of the basal ganglia seem to possess. This theory of Luys does not differ markedly from that advanced by Mitchell, viz., that the cerebellum serves as a storehouse of nerve-force, which may be drawn by means of any of its peduncles when emergencies arise to demand it. Some interesting physiological experiments have been made, which seem to point to some intimate association between the cerebellum and the basal ganglia. We know that section of the middle peduncle of the cerebellum almost invariably gives rise to a peculiar "forced movement," the animal rolling rapidly round its own longitudinal axis, the rotation being commonly toward the side operated upon.[2] This is accompanied by a peculiar dancing and oscillation of the eyeballs, termed "nystagmus."

[1] The connection of the *auditory nerve* with the cerebellum is now quite generally accepted by neurologists.

[1] Journal of Nervous and Mental Diseases, January, 1883.

[2] Bechterew has lately shown that section of the *olivary bodies* has the same effect.

Now, Purkinje observed long ago that electric currents sent through the head from ear to ear produced the same movements of the eyeballs and a tendency toward the forced movement of rotation. The patient leans toward the anode, and objects spin before the eyes in the direction of the electric current. When the current is broken the objects revolve in an opposite direction, and the patient leans toward the cathode. Hitzig has shown that neither the vertigo nor the movements of the patient's body depend upon the objects perceived by vision, since the same phenomena were witnessed in blind subjects and in those whose eyes were closed. He found also that vertigo could be excited in this way with a current too feeble to excite ocular movements.

These remarkable experiments have been used by different authors as confirmatory evidence of the three following propositions: 1, that the symptoms produced indicated an anelectronic and catelectronic state of the respective auditory nerves; 2, that the cerebellar structures were called into action by the current; 3, that parts of the cerebrum were affected by the current.

The experiments of Cyon afforded ground for the first proposition, since he found that, when the semicircular canals of the ear were divided, peculiar "forced movements" and a loss of co-ordination were produced. The symptoms noticed in auditory vertigo (Menière's disease) are strongly in accord with these experiments, since slight defects in hearing appear to produce in some instances alarming vertigo, vomiting, and unconsciousness.

The second proposition seems improbable, because the seat of the electrodes would appear to be too far removed from the cerebellum to directly affect it.

The third proposition is based upon the situation of the electrodes and the fact that the electric current may be supposed to pass in the most direct line through the cerebral substance. It is possible that the artificial current is sufficiently strong to arrest in its passage the cerebellar current which constantly flows into the cells of the caudate nucleus of the corpus striatum, and that the symptoms of vertigo and inco-ordination are to be thus explained.

From a standpoint of our present knowledge, the cerebellum must be considered as the "terra incognita" of the brain. The clinical evidence is discordant. The anatomical connections of the cerebellum with other parts of the nervous system are remarkable, and their minute structure is, as yet, imperfectly understood. The region overlapped by the cerebellum is interspersed with important collections of gray matter which act as nuclei of origin for important nerve-tracts; so that all experiments made upon the cerebellum itself or its peduncles are liable to cause injury to some of the neighboring parts, and thus to yield results which are puzzling and unreliable. Conjecture inevitably forms an important element in all of the theories advanced respecting the functions of the ganglion itself, or of certain of its parts. Nothnagel claims to have demonstrated that mechanical stimulation of the surface of the cerebellum will give rise to muscular movement without signs of pain being perceived. He found that these movements developed slowly, appearing first on the side operated upon and then ceasing, only to appear upon the opposite side. He states that he has demonstrated that the fifth, facial, and hypoglossal nerves, as well as nerves distributed to the trunk and extremities, can be thus called into action. The same observer concludes that destruction of the *commissural fibres* of the cerebellum alone produces inco-ordination of movement. Hitzig and Ferrier believe that injuries to the lateral lobe produce the same varieties of "forced movements" as are noticed after section of the middle peduncle. Flourens observed that injuries to the anterior or posterior parts of the median process caused animals to fall forward or backward respectively, and his views have been confirmed by others. Ferrier found that stimulation of the cerebellar cortex by the interrupted electric current produced in monkeys, cats, and dogs movements of the eyeballs, with associated movements of the head, limbs, and pupils. Adamuck produced the same effects, however, by stimulating the corpora quadrigemina. Hitzig refutes the view that Ferrier's results were due to an escape of the current by claiming to have produced similar effects by mechanical irritation of the cortex. Eckhard has brought forward facts which tend to show that in certain parts of the cerebellum lesions tend to produce diabetes or simple hydruria, thus resembling the effects of irritation of the medulla in the region of the floor of the fourth ventricle.

In the face of this conflicting mass of experimental evidence, I mention now one of the most plausible and attractive theories respecting the relation of the cerebellum and cerebrum to muscular contraction, which has been advocated by Spencer and sustained by Hughlings-Jackson, Ross, and others. It is believed by these authors that all *continuous tonic muscular contraction* is governed by the cerebellum, and the *alternate* or *clonic muscular contractions* by the cerebrum, in so far as they are required to maintain a posture or produce a change in attitude. In all efforts to maintain an attitude (once assumed as the result of some cerebral impression received), the cerebellum holds the muscular apparatus in its proper state of tonicity; but when the attitude is to be changed, for any possible reason of which the cerebrum is conscious, the proper muscles are relaxed and others thrown into a state of contraction by means of the higher ganglion. The body is then entrusted to the influence of the cerebellum if the attitude is to be again

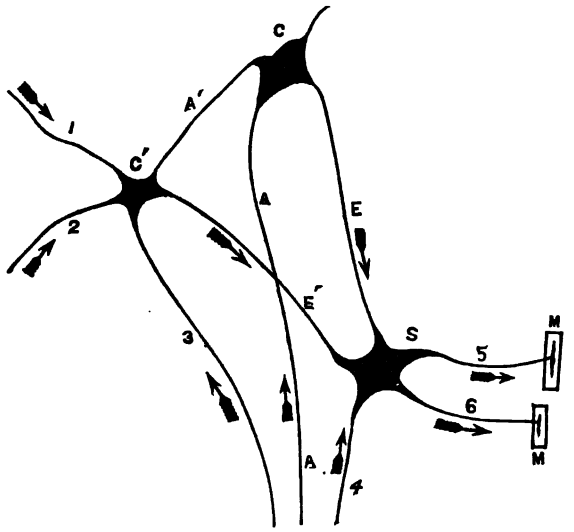

FIG. 4.—A Diagram designed to Illustrate the Encephalo-Spinal Action. (Modified from Ross.) C, cerebral cell; C', cerebellar cell; S, spinal cell; 1, fibres connecting the cerebellum with the optic apparatus; 2, fibres connecting the same with the auditory apparatus; 3, fibres connecting the same with the tactile apparatus; A, afferent fibres of the cerebrum; A', fibres connecting the cerebellum with the cerebrum; E, efferent fibres of the cerebrum to the spinal cells; E', efferent fibres of the cerebellum to the spinal cells; 5, 6, motor fibres from the spinal cells to the motor plates of muscles (M); 4, afferent (sensory) fibres from the peripheral parts of the body to the cells of the spinal cord (3 has probably a communication with the spinal cells before reaching the cerebellum). Note that each of these three sets of nerve-cells possesses a group of afferent (sensory) as well as efferent (motor) fibres connected with them; also that each can thus exert an automatic action, when required to do so, or be governed at other times by the cells of the ganglia above.

maintained. Thus it is suggested that the cerebellum be considered as capable of automatic action, but still as a subordinate to the cerebrum, which possesses the power of overcoming it in one of two ways: First, by increasing the supply of nerve-force to certain sets of cells, then under the influence of the cerebellum, and thus altering their action upon muscles; or second, by inhibiting or totally arresting the cerebellar influx to the antagonistic sets of muscles. Both are designed, according to this view, to act either automatically or in unison, but the cerebellum is the servant of the cerebrum to do its bidding when required.

It will be at once perceived that this theory applies to the complex physiological acts of walking; the prolonged maintenance of any given posture; the transfer of the

centre of gravity; the passive state of groups of muscles; and many of the morbid phenomena observed in muscles, as the result of impairment of the higher nerve-centres. It will be impossible to discuss all of these conditions in this connection. Hughlings-Jackson and Ross have covered the more important points in their works. If we form our views of the physiological functions of the cerebellum purely from the standpoint of the anatomical connections which that ganglion is known to possess, we cannot but agree with Bechterew in some of the conclusions which he has lately advanced. This author believes that the cerebellum is intimately connected with three organs, which tend to exert an influence upon equilibrium, as follows: First, the *semicircular canals*, connected with the organ of hearing; second, the *organ of sight*, since the movements of the globe of the eye and possibly the sense of vision may be traced to a relation with the gray matter in the floor of the third ventricle and subsequently with the cerebellum; third, the *olivary gray matter*, which the author thinks is probably connected with the organs of tactile sensibility.

The views of this author have been in part anticipated and sustained by Spitzka, who, in an article published about two years ago, considered the cerebellum as the centre where "impressions of touch and position are associated with those of time and space," and hence the seat of coördination of the most delicate forms of movements; such as are necessary, for instance, to the proper adjustment of the drum-membrane of the ear for the correct appreciation of sounds, the appreciation of time and rhythm, and the finer acts of equilibrium. In filling this position, the latter author believes that the cerebellum is subordinate to the cerebrum, to which it acts as an "informing depot" for coördination, rather than as a distinct centre.

Progress of Medical Science.

Recovery after a Large Dose of Digitalis.—Dr. Antonin Martin reports in *L'Union Médicale*, for September 18, 1883, the case of a man, forty years of age, who had taken through mistake an infusion containing six hundred grains of digitalis leaves. He was not seen until twenty-two hours after the accident, at which time he was vomiting incessantly, the skin was cold and dry, the extremities were cold, and he complained of pains in the legs; there was no headache, the pulse was slow, 25 to the minute, strong and regular. Two days after the digitalis had been taken, he began to suffer with intense cephalalgia, located in the left side of the frontal region, and at the same time there were troubles of vision. The patient saw bright specks dancing before his eyes, and even figures of all sorts of animals. Two days after this again he was seized with aphasia, which continued for four days and then ceased. After this the cephalalgia disappeared and the visual disturbances gradually subsided. The recovery, Dr. Martin thinks, was attributable to the poor quality of the digitalis rather than to any remarkable powers of resistance to the poison on the part of the patient.

Treatment of Catarrhal Otitis in Infants.—In catarrhal otitis of the new-born, poultices should be applied to the pavilion, and injections made into the auditory canal of a decoction of poppy heads as hot as can be borne. As soon as a discharge is established, a little borax is to be added to the injection. When the pain is severe, a pledget of cotton dipped in an oily solution of morphine may be placed in the ear. When the pain seems to be nearly gone the decoction of poppies may be replaced by a one per cent. solution of chloral, warmed, and injected slowly by means of a small syringe. Finally, when the pain has ceased entirely, an application of alum and glycerine (1 part to 20) is to be made after each injection.—*L'Union Médicale*, September 18, 1883.

Antiseptic Sugar Dressings for Wounds.—Dr. Fischer reports in the *Centralblatt für Chirurgie* for August 25, 1883, that he and Professor Lücke have used this application in several instances with satisfactory results. They have used a mixture containing equal parts of sugar and naphthaline, and one of iodoform one part to sugar five parts. The mixture is rubbed into gauze, which is applied over the line of suture, or, where there is a loss of integument, the sugar is strewn directly upon the tissues. Sugar cushions were prepared and used in the same way as peat or sublimate sand cushions. The dressings may be left *in situ* for eight or ten days. The secretions are diffused equally throughout the mass of sugar, except when the layer is too thick it sometimes becomes lumpy. There was never any bad odor about the dressings, even when they had been on a long time. Granulation proceeded finely under the sugar; there was no bleeding, and cicatrization was quickly accomplished.

Irreducible Phalangeal Dislocations.—In a patient under the care of Dr. Weinlechner there occurred a dislocation of the thumb from over-extension. Although the thumb could be replaced and the joint surfaces separated for some distance by traction, as soon as this was remitted the phalanx returned to its former place on the dorsum. Even after a resection of the head of the metacarpal bone, the luxation was still irreducible. No cause could be found for this, as neither the palmar portion of the capsule nor the tendon of the long flexor was interposed between the ends of the bones.—*Centralblatt für Chirurgie*, August 25, 1883.

In the following number of the same journal is the report of a case by Dr. Willemer of dislocation of the index finger. Although, as in the former case, it could be easily reduced, it could not be retained in its normal position. An incision was made, when the obstacle to reposition was seen in a small sesamoid bone in the capsule of the joint, which had slipped in between the ends of the bones. This was removed, and the finger was then easily retained in place.

Treatment of Recto-Vaginal Fistulæ.—In cases in which the fistula is situated not more than an inch above the anus, Dr. Monod incises the perineum up to the seat of injury, freshens the edges of the fistula, and then closes the wound by deep sutures passed from the vagina. In order to insure success, he recommends that, prior to the slitting up of the perineum, a stick of nitrate of silver be introduced into the fistula and passed carefully around its entire circumference. By this means the edges are whitened, and can be easily recognized during the operation.—*Centralblatt für Gynäkologie*, September 8, 1883.

Urethral Calculi.—In a recently published monograph upon calculi in the male urethra, Dr. Maximilian Zeissl relates several hitherto unreported cases of this affection. Most frequently the calculi have a renal origin, but sometimes are formed in the urethra itself from particles of mucus which become lodged behind a stricture, in the bulbous portion of the urethra, in the fossa navicularis, or in some diverticulum. They may also be formed from some pieces left behind after an operation for stone in the bladder. The lumen of the urethra is narrowed and sometimes completely closed by the continued growth of a calculus. In other cases stones are formed about foreign bodies introduced from without. Frequently the stones are seen to be channelled out on one of their sides, so as to afford a passage for the urine. The diagnosis of urethral calculi may present great difficulties when they lie in a diverticulum, and also at times when they occupy the prostatic portion. When the urethra is large, it is sometimes possible to push an impacted stone back into the bladder, and then to extract it through a large-eyed catheter. If this procedure fails, the calculus is to be removed by an instrument adapted to the purpose, or by direct incision through the wall of the urethra.—*Centralblatt für Chirurgie*, September 8, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 3, 1883.

SECONDARY DEGENERATION OF THE SPINAL CORD—SOME NEW FACTS.

PROF. SCHULTZE, of Heidelberg, successor to Erb in the chair of Nervous Diseases, has recently published (*Arch. f. Psychiatrie*, xiv., 2.) an article upon the pathology of secondary degeneration in the spinal cord, which contains many new facts. His conclusions are based on a study of microscopic sections of the cord at different levels in five cases of compression myelitis. In each of these cases the compression was exerted on different parts of the cord, from the cauda equina to the cervical enlargement. In one of these cases the symptoms, persisting for seven years, were paralysis and anæsthesia in the regions supplied by both sciatic nerves, and the lesion was limited to them near their origin. In the other cases the lesion involved other nerves as well. All the cases were accompanied by ascending degeneration in the cord, limited to the posterior columns and to the direct cerebellar columns.

In regard to the degeneration in the posterior columns, Schultze finds that while the entire posterior columns, except a small zone to be mentioned below, are involved just above the lesion, the area of degeneration diminishes as it ascends, and is limited to the columns of Goll, *i.e.*, the posterior median columns, at the level of the cervical enlargement. In the case in which the sciatics alone were involved, the area of degeneration in the cervical region was limited to the posterior and inner portions of the columns of Goll. Where all the nerves below the eleventh dorsal segment were cut off from the brain, the entire column of Goll was involved. When the lesion was still higher, the columns of Burdach—*i.e.*, the posterior lateral columns, as well as the columns of Goll, were in a state of degeneration. He concludes that the extent of the area of degeneration is in exact proportion to the clinically ascertained disturbance of function, *i.e*, the more sensory nerves cut off from communication with the brain the greater the area of degeneration in the cord. The tracts connecting the sciatic nerves with the brain lie in the inner and posterior part of the columns of Goll. The tracts connecting the lower extremities with the brain lie wholly in the columns of Goll, and are sufficient to make it up. Hence the columns of Goll in their entire extent are connected functionally with the sensitive nerves of the legs, and not with those of the arms as well. The longest bundles of centripetal nerves lie in the columns of Goll, just as the longest bundles of centrifugal nerves lie in the pyramidal columns. As nerve after nerve enters the cord as we ascend from below upward, its fibres arrange themselves in succession, laterally and posteriorly, in the posterior columns, taken as a whole, the sciatic nerve-fibres lying farthest back and most nearly to the median fissure, those of the crural nerves next to these and bounding them antero-laterally, those of the dorsal nerves next, and lastly the fibres from the cervical nerves filling up the columns of Burdach.

Since the area of degeneration after a lesion at any point becomes smaller as it ascends, it follows that a part of the fibres which were degenerated near the lesion either stop short, or cease to degenerate as they ascend. The latter is improbable, since it is in the very longest fibres, viz., the sciatics, that degeneration is always found. Hence it is probable that a part of the fibres which enter the cord from the nerve-roots and start upward in the columns of Goll, end without reaching the medulla. Schultze therefore distinguishes long and short nerve-fibres in the posterior columns. He thinks that at first, *i.e.*, opposite any given nerve-root, these are mingled, but higher up the long fibres alone remain, and are collected together in the posterior and inner part of the posterior columns, in the order previously mentioned. A sharp line cannot be drawn at present, however, between the median long and the lateral short tracts at every height.

In the area of degeneration in the posterior columns just *above* the lesion, there is always to be found a small half-moon-shaped zone lying next to the posterior gray roots and free from evidence of change. Just *below* the lesion, however, a similarly situated area is found degenerated, though no other part of the posterior column is here affected. Schultze considers that this is proof of the existence of fibres from the posterior nerve-roots which bend downward after entering the posterior columns. Such fibres are only 2 to 3 ctm. in length, as determined by the extent of degeneration. This confirms the statement of the anatomist Schwalbe. There is, therefore, a small amount of descending degeneration to be found in the posterior columns, as well as a large amount of ascending degeneration after a transverse lesion.

In regard to the ascending degeneration in the direct cerebellar columns, Schultze finds that it occurs only when the lesion is located at a point higher than the last dorsal segment of the cord. The fibres to these columns are known to have their origin in the large gray cells of the postero-internal gray matter of the dorsal region—the columns of Clarke. As long as connection between these cells and the brain remains, the cerebellar tracts do not degenerate. Lesions above the last dorsal segment will break this connection and produce the degeneration. Schultze maintains that these direct cerebellar columns extend further forward than in Flechsig's diagrams, and states that when they are degenerated the zone of degeneration reaches the anterior nerve-roots, without, however, involving them.

In regard to descending degeneration, Schultze also makes an addition to our knowledge. Such degeneration has been supposed to be limited to the direct columns of Türck, *i. e.*, the anterior median columns; and to the

crossed pyramidal tracts in the lateral columns. Schultze shows that in all his cases there was also a decided degeneration in the anterior and in the lateral columns, extending from 8 to 10 ctm. below the lesion. He considers this evidence of the existence in these columns of short centrifugal fibres connecting adjacent segments of the cord.

The lateral fibres lying just adjacent to the gray matter escaped degeneration in all cases. Hence they will neither degenerate upward nor downward. It has been supposed that these fibres convey impulses in both directions, and thus connect reflex arcs. Schultze prefers to consider them as in connection with gray ganglion-cells at both ends, and thus capable of being nourished from the cell at either end.

As to the nature of the process of secondary degeneration, Schultze declares himself in favor of the theory that the increase of connective tissue is a consequence of the destruction of nerve-fibres, and suggests that the débris of degenerated fibres acts as an irritant and produces the connective-tissue inflammation.

The difference between degeneration in the posterior columns secondary to compression, and the degeneration present in locomotor ataxia, is that in the former the short fibres escape except at the level of the lesion, while in the latter both short and long fibres are involved in the entire cord. Schultze finds a support for his statement that the columns of Goll are made up of fibres from the lower extremities, in the fact that in cases of ataxia where the legs are most implicated, the lesion is most intense in these columns in the cervical region; but where the arms also are involved, the lesion extends beyond them to the columns of Burdach.

Schultze urges a microscopic examination of diseased cords, as these distinctions are impossible from the macroscopic appearance.

AN UNUSUAL ADDRESS.

The lambent flame of the average London introductory address burst up into something like fireworks a short time ago, beneath the breath of Dr. T. Clifford Allbutt, lecturer in the Leeds School of Medicine. It is plain from reading his address that Dr. Allbutt is not an ordinary orator, nor a commonplace thinker, whatever else we may call him; for in the space of an hour he trod with a perceptible pressure upon each particular toe, so to speak, of the British foot medical.

First of all, the speaker declared that the doctor's profession is not inherently a noble one. We beg our readers to listen to the heresy:

"As to the nobility of our calling, a man may sell fish to the glory of God—that, remember, is as it may please you to make it."

"Essentially speaking, to patch up a man's clay carries to my mind no sense of inherent nobleness as a calling. Skill, knowledge, acuteness, all these it must have, nobility, none necessarily. . . . Like him who made two blades of grass grow where one grew before, the doctor's useful business is to conserve or develop forces for higher ends than his own. If we be driven to such an issue, it is better we should be a free and great-hearted nation than a healthy one!"—not mentioning the fact that unless you are healthy you are not very likely to be great-hearted. Dr. Allbutt dwells much upon the "ignoble ease" of a too sanitary existence, and recommends his hearers "to die young gloriously" rather than "live ignobly for a century."

The doctor, according to our English orator, is a kind of homoculturist, who prunes, purges, and fertilizes, that fruit may result. His services are personal and private, are rendered to the individual, not to the State. Therefore the doctor does not deserve and should not clamor for State rewards or distinctions (alas for the medical knights and baronets!); his reward is in his work.

But Dr. Allbutt is just enough to say that, although the doctor's life is not essentially a noble one, yet practically it generally is such.

"Do I say, then, that your lives shall be mean lives? God forbid."

"The general practitioner of medicine, as I often witness, even to my shame, devotes his profession, and indeed his life, to the good of others, after a fashion which ennobles any work. Herein, gentlemen, is our true patent of nobility, loftier far than any coronet. The doctor who does, however honestly, only the work that he is paid for is rare in the ranks of general practice; and his life, I repeat, is a useful, but not a noble one. General practitioners obey a far larger and more lovely idea than that.

"Our brethren walk fearlessly, unconscious of heroism, beside the pestilence, snatching men from its breath, and bearing away the stricken to safety. When the typhus epidemic fell upon us in 1865, and our fever hospital was a pest-house, men from general practice stood by me, holding their own lives cheap, at the call of duty and humanity. Mr. Burroughes died at his post; Mr. Swann died at his post; Mr. Libby, happily now living, was smitten heavily, and barely rose again from his bed. Yet I had no lack of volunteers."

In speaking at first of the personal character and secondary value of the doctor's service, slight mention is made of his work in preventive medicine. One must but feel that there is some injustice in sentiment and fallacy in argument here, as well as previously, for, after all, personal service and individual happiness form the ultimate aim of every kind of social work and political endeavor. State services, if we examine them closely, are really only valuable because they increase individual happiness, are in the end personal. Is it better or nobler to pass a tax-law than to prevent an epidemic? Dr. Allbutt makes amends for his first generalizings by the following concreteness:

"Less brilliant, but, in its steadfast unselfishness, perhaps incomparable, is the voluntary sanitary work done by general practitioners before the establishment of sanitary districts. Of these services the careless public is yet scarcely aware. Did the members of any other profession ever seek odium, and even rancorous enmity, by persistent endeavors to cut down their own incomes in the interests of their clients? To speak plainly: enteric fever, for instance, was worth perhaps a steady hundred a year to many a town or country practice—not counting the luck of epidemics. Now, hundreds of doctors—you know many of them yourselves—in human pity,

have striven to suppress this and other such maladies; spoiling their own incomes, and earning, not the thanks, but even the curses of the public; offending not the poor, but the rich—the landlords, the thriving farmers, the Poor-law guardians—the class upon whom the rest of their shrunken practice must depend."

Perhaps we cannot on the whole complain of Dr. Allbutt's picture of the medical life. It is that doctors are of ordinary human clay, but that most of them find and use the rich opportunities for noble and self-sacrificing acts that a medical career furnishes. He should, Dr. Allbutt thinks, get his pleasure and reward in his work alone; and this is well, but we would add: Why not let him aspire to something further and higher if he wishes? The standing of the profession will be measured by its claims. If it is content to be a drudging, clystering business, it will remain such. Despite Dr. Allbutt, we say, let not the doctor think that a round of noble toil ignobly rewarded is the all that his profession offers. If there be high rewards in science, art, social regard, or governmental recognition let him get them if he can.

THE PRONUNCIATION OF MEDICAL WORDS.

A CORRESPONDENT from Mendon, Mich., writes us as follows:

"I have long noticed that among physicians there is a want of unanimity in the pronunciation of certain medical words, such as the termination 'itis' in bronchitis, etc., râle, quinine, and perineum. Will you please give us the accepted pronunciation of these words and thus oblige."

It is very unfortunate that there is no absolute standard for the pronunciation of many medical terms. Those that are derived from the Latin and Greek are pronounced by most teachers and lecturers chiefly according to the Continental or Roman methods. Many words, however, would not sound familiar if so pronounced, and consequently a sort of mongrel orthoëpy prevails. But even apart from this mixed and unjustifiable method, which applies chiefly to anatomical nomenclature, there are many commonly used words which are as frequently mispronounced.

We append here a few of them:

Abdo'men has its accent on the penult, not the antepenult.

E'x-cretory is accented on the antepenult.

F'e-brile has a long *e* and a short *i*, the latter pronounced like *i* in hit, according to most authorities.

Hy'- or *Hyd'-a-tid* has the accent and division of syllables as indicated.

Max'illar has the accent on the antepenult.

Mid'wifery is accented as shown.

Phthisis, *bronchitis*, and all words ending in the inflammatory "itis," are pronounced with a long *i* like that in mite, according to nearly all lexicographical authorities. The customary pronunciation of these syllables, however, in all parts of the United States (except to some extent in New England) is to give the *i* the sound of long *e*, which it had in its original Greek derivative. A custom so long and universally sanctioned, upheld by etymology, gives authority to this pronunciation and we believe it to be more justifiable and correct, as it certainly is more euphonious, than the lexicographical one.

Quinine, according to all dictionary authorities, has the first syllable pronounced like "kwi." The word is variously divided and accented, there being no settled authority either as to this or the length of the vowels. No English or American lexicographer admits the very common pronunciation "kee-neen." Yet we believe that this last is the more correct. Quinine was originally, and is now as it stands, a French word, and naturally should have the French pronunciation. Custom has given it this, although the dictionaries would take it away. An English equivalent, such as "*quinia*" might very properly be used and pronounced as an English word.

Se'cundine has its accent on the antepenult.

Trephine' is accented on the last syllable.

Vag'inal, according to most authorities, is accented on the antepenult, although the noun vagina is accented on the penult.

Emesis, not Emē'sis.

The list of words given in most dictionaries, whose pronunciation differs, according to different authorities, includes nearly fifty medical terms.

It follows that a correct medical pronunciation is not an easy thing to obtain, though a vast improvement might be made on the present practice.

A PRACTITIONER WHO IS NOT BUSY.

WE print below a letter received from a correspondent living in a large city. The author is apparently very much in earnest, and his appeal for advice will doubtless be found interesting to many. He writes:

"Dear Sir: I have a question to propose not very easy to answer. I am a man of two years' practice who has met with a fair measure of success. I have realized each year the income that Dr. Willard Parker, in his article on "Success in the Medical Profession," names as the limit. I have a comfortable office, an examining room, and another apartment. I have besides my fees about two hundred a year. I am just able to make both ends meet and to have a little pleasure; yet without having any real hardships I am discontented. Now, the great cause of this discontent is idle time. The major portion of the day I have nothing to do. I am not connected with any school, hospital, or dispensary, and don't know how to get at them. I am sick of reading. I must have an object in my pursuits, and it must not be too distant, and I do not think I am alone in this. Now, studying up diseases which one does not see and delving into abstrusities that one can never ventilate is rather tasteless at the end of two years. But what am I to do with my time? Set me some task, tell me what I ought to do, lay out some useful line of study, anything with an end in view which a man with some resources, a fair mind, and an illimitable amount of energy can do. There must be a positive object within reach that is essential to interest in the work. Few of us like work simply for the work's sake. Do not think that I have no interest in my profession. I love it above all other work, but I love it in its practicable rather than in its sci-

entific aspect. There must be something to be accomplished, a test of the work—that is what I desire. Now can you solve the problem? I am but one of many, but am among the worst, as being the most restless. Very respectfully, A Master of Arts and Doctor of Medicine, an idle man with a desire for work."

It is somewhat rare to find a person of illimitable energy who can find nothing to expend it on. Perhaps our correspondent is mistaken about his being so industrious, and that what he thinks is energy is only restlessness and incapacity for systematic application. He has evidently, in reading medicine, been at it in a hap-hazard way. He should try studying some special line. Does he know German and French? If not he will be sorry later to find himself handicapped in his future struggles, when a busier man. To a person with "illimitable energy" there is no trouble in finding some dispensary-work, even if in the humble capacity of assistant or substitute. There are numerous physicians in the city who would be glad to have the leisure our correspondent deplores for such literary and scientific work as would supplement their practical experience. Our energetic correspondent should find out these and offer his services. Is there no practical work in the societies, clinics, hospitals, or dispensaries which pleases him? If so, let him attend these places and stick on till he finds some one whom he can tender his leisure to, or who will find some work for him.

We fear that our correspondent in reality lacks energy and perseverance.

THE RIGHT TO KILL MONSTROSITIES.

Some correspondence has appeared in the columns of the *Boston Medical and Surgical Journal*, as to what physicians should do with living monstrosities, which they have just delivered. One correspondent writes that an old physician of high character and standing, had always been in the habit of killing them immediately after they were brought into the world. The writer himself had been content with simply neglecting them, hoping that life would cease if the ordinary precautions were not taken.

The question of what medical conduct should be in these circumstances is one that has often been raised. It appears, on the face of it, more humane both to child and parent to destroy a life which is at once revolting and painful. And it has even been claimed that the physician exhibits a moral weakness and timidity in refraining for personal reasons from "stilling the 'wrongly' spun life."

The same line of argument has been raised also as to the application of euthanasia in cases of painful and fatal disease. An ex-Judge of this city has openly and eloquently argued that it is right and justifiable to end the intolerable agonies of the moribund by medicinal means. In Paris, a fund has even been left for the creation of an institution where euthanasia may be practised.

Despite the strong case which apparently exists for the views thus cited, there is, so far as the medical profession is concerned, no justification in adopting them. Society requires for its own safety that human life in every form should be considered sacred. The physician in his individual capacity has no right to say that any spark of vitality, however feeble or miserable, shall be extinguished. If, in obeying this principle, he causes some increase of individual suffering, the general results of his conduct will be for the true interests of society. He should not destroy, either by active means or passive non-interference the life of even the most misshapen monsters.

POISONING BY STRYCHNINE—THE TRIAL OF MRS. COATS, OF BULWER, QUEBEC.[1]

A recent trial for murder in the city of Sherbrooke, Province of Quebec, has caused intense excitement throughout the eastern townships of that Province. The facts, briefly stated, are as follows: On August 26th, ult., a respectable young merchant, of Bulwer, Quebec, suddenly died, with all the symptoms of poisoning by strychnine. Suspicious circumstances pointed to the wife of the deceased as the person who administered the poison. An inquest was held and a post-mortem examination was ordered, the results of which confirmed the suspicions that Coats had died from strychnia given by his wife. The latter was accordingly indicted for murder, and the trial has lately concluded with the acquittal of the accused woman. Such, in brief, are the facts. A more particular statement of certain features of the affair, brought out by the trial, will be of interest to physicians.

Mr. Coats had been in his usual health till within an hour of his death, when, complaining of a little pain from indigestion, his wife prepared for him, in molasses, and gave him what she called a dose of rhubarb powder. Tetanic convulsions in a few minutes supervened, from which Coats soon died, in the presence of two neighbors who were hastily summoned. The limbs were rigid and the jaws were set; the mind remaining clear to the last. The only explanation that the accused could give of this singularly sudden death was that the deceased had a short time previously eaten choke-cherries and drank freely of milk. The autopsy, which was conducted with sufficient care, revealed no choke-cherries and no milk-curds, and nothing apparently which could cause death. The contents of the stomach, however, on being submitted to an expert, were shown to contain a considerable quantity of strychnine, as proved by the bichromate test and by the frog test. Several frogs died in a few minutes from tetanic convulsions by being slightly wounded in their legs and then put into a filtered solution of the contents of the stomach of the deceased.

It was shown by the prosecution that there was a motive for the murder, and that the means—with too little adroitness—had been provided. A guilty correspondence with a paramour had been for some time going on, the prisoner writing to the latter under a fictitious name. It was also proved that the prisoner had been unfaithful to her marriage vows. On August 23d, just three days before the murder (which, with all the evidence before us, we cannot but regard as such), Mrs. Coats had taken from the post-office a letter from a neighboring apothecary, addressed to her care, and containing fifty cents worth of strychnia! This fact was not

[1] Report of trial of Mrs. S. E. Coats, for poisoning her husband by strychnine. Examiner's Office, Sherbrooke, P. Q.

denied by the defence, nor was any explanation attempted of the circumstance, or of what use was to be made of it, or of what disposal was finally made of it.

Mrs. Coats (who is said to have been young and good looking) was acquitted, although the judge strongly charged the jury to convict. Three or four circumstances contributed to unsettle and confuse the jury, and these it may be well to state.

It was alleged that the medical men who conducted the autopsy had been negligent in leaving the stomach of the deceased man exposed in an open jar for half an hour in a room to which any one might have had access while they were giving their testimony before the coroner's jury. During that time, said the defence, somebody might have tampered with the stomach, putting in a little strychnine! Foolish as is this plea, it doubtless had some weight with the jury. It is true that physicians conducting an autopsy where such important issues are at stake cannot be too careful to make such strictures and censures impossible. If the stomach is to be examined on the spot let it be done at once and before competent witnesses. If the contents of the stomach are to be removed let it be done immediately before witnesses, and let the jar containing the stomach or its contents be hermetically sealed till the proper time for examination. This is a medico-legal point of great importance, and it is surprising through what a little loophole lawyers for the defence will sometimes contrive to squeeze their client!

The evidence of one of the medical gentlemen summoned by the defence was of a somewhat surprising character. He regarded experiments performed on frogs with a view to determining the physiological action of toxic agents as unreliable. In the particular instance the tetanic convulsions from which the frogs died as a result of the experiments made to determine the nature of the contents of the stomach of the deceased man might have been caused by the incision in the legs of these animals; such wound having been made to facilitate absorption of the poison! Other frogs with similar wounds in their hind legs and placed in plain water did not have convulsions or apparently suffer. As if this specious pretence might not have sufficient weight with an ignorant jury, this same village expert gave as his opinion that septic products of decomposition, generated in the stomach of the dead man during the three days that elapsed between the decease and the examination, caused the convulsions in the frogs, and that Coats died of idiopathic tetanus! It is hardly necessary in a medical journal to comment on such a silly assumption, which was set aside by His Honor the judge as not worthy of serious consideration. There are, however, one or two points in this connection worthy of note. "Truth never can be confirmed enough," says Shakespeare. The analytical chemist should have carried his investigations farther. Having obtained a filtered watery extract of the stomach of the deceased, he should have tested it *by the hypodermic method* on frogs, and on animals higher in the scale; kittens, rabbits, fowls, dogs, etc. Then if he had produced speedy tetanoid convulsions, there would have been no reasonable basis for doubt. If the gentleman who gave such remarkable testimony for the defence had ever performed on animals experiments with the subcutaneous injections of septic fluids, he would not have risked his reputation by attributing the results which Dr. Vallie, on the occasion above referred to, obtained with his frogs to septic poisoning.

It is, moreover, always well when performing an autopsy that is likely to be of great medico-legal importance to remove by a catheter some of the urine of the deceased person for chemical examination. If the death had been caused by strychnia, enough would surely have been absorbed to affect the urine in which its presence might have been detected. If the color test be somewhat unreliable, surely as confirming other tests it cannot but have considerable weight; nor has it been shown that any substance except curare produces with bichromate of potash and sulphuric acid precisely the same colors as strychnia. But curare as a medicine or poison is almost unknown in this country.

THE WATERCOURSES IN NEW YORK CITY.

In view of the opinion expressed by many that New York city does not have the conditions (except in a few localities) for engendering malarial diseases, it is interesting to study some of the maps of the city which show the track of old watercourses. It is estimated that the volume of water drainage from the eighteen miles of sluice built above Fifty-ninth Street on the west side exceeds that of the sewage which empties just below it.

In 1871 there were 5,000 acres of undrained land in New York County. In 1873 there were still 2,500 acres of water-saturated land.

Of the watercourses south of Fifty-ninth Street there still remain traces of one, perhaps the largest, which is or was known as Minetta Water. This stream arose from two sources, nearly as high as Twenty-first Street, and drained the back-bone of the island for some distance, finally emptying into the North River.

In the earlier part of the present century, according to a writer in *The Times*, the Minetta, near Eighth Street, was a stream twelve feet wide. There is no reason to believe that its bounds became more circumscribed as it crossed Washington Square on its way to the fresh water pond and the North River. This width represented merely the actual width of the stream, which is said to have been a lovely brook, flowing between low banks. The ground, saturated with its waters, must have extended for some distance on either side, and this marshy territory was greatly increased when the hills were scraped down into the channel, streets graded, and the course of the water dammed. Fed by living springs, Minetta is to-day still an actual stream of water. The diminution in its volume is not due to the cessation of the springs which fed it one hundred years ago and feed it to-day, but to the diversion of at least a portion of the drainage, which formerly found its way into the stream, into the sewerage system of the city.

In 1859, a physician who had practised in New York for many years stated that he could trace the course of the stream by his practice in intermittent fevers.

Later experience has, we believe, shown that malarial fevers were frequent on the course of old streams. As the earth has become saturated with animal matter the types of fevers have changed.

News of the Week.

THE LATE DR. BEVERLEY LIVINGSTON.—At a stated meeting of the New York Pathological Society, held October 24, 1883, the following memorial tribute to the memory of the late Dr. Beverley Livingston was unanimously adopted: The decease of our late colleague, Dr. Beverley Livingston, brings to the Pathological Society an uncommon sorrow. When in the fulness of years one of our number is called from our midst, the knowledge that separation must come at last and the pleasurable recollection of completed labor reconcile us to our loss. But when we are deprived of the counsel of one who gave such promise of useful and invaluable aid, before whom there seemed to be a long and honorable career, and an almost achieved reputation, our sorrow is deep indeed. Dr. Beverley Livingston was distinguished by an earnest zeal, indefatigable industry, by love and devotion to his profession. While he gathered, in the pursuit of practice, some of the fruits which the latter yields, he gave an ample return by aiding, as an active coworker with us, the advancement of science. Though his career was incomplete the lesson of his life is none the less perfect. To have won the respect and esteem of his colleagues, the admiration of his friends, to have been honored in the full discharge of his duties as a man and physician, is the reward which the memory of our late associate proudly and justly claims. The New York Pathological Society presents this tribute to the worthy family of the deceased, in the hope that in it they may find a better consolation than in words of sympathy.

(Signed) H. N. HEINEMAN,
F. FERGUSON,
E. L. PARTRIDGE,
Committee.

THE INTERNATIONAL SANITARY CONFERENCE.—According to the Roman papers all the European powers have agreed to the proposition of Italy to send delegates to an international sanitary congress in Rome, in order to draw up an international sanitary code. The conference will meet during the present month of November.

THE SUCCESSOR OF THE LATE PROFESSOR LASÈGUE, M. Jaccoud, has been transferred, at his own request, from the chair of Internal Pathology to that of Clinical Medicine, left vacant by the death of Professor Lasègue.

THE ATTEMPTED MURDER OF DR. ROCHARD, a prominent physician of Paris, has excited much attention. The doctor, while walking along the street, was shot in the chest by a man who turns out to be a remarkable and interesting (except to M. Rochard) case of "Délire des Persécutions."

DR. TOMSA, of Kieu, has been appointed Professor of Physiology at Prague.

SOME IGNORANT CRITICISM.—*The Lancet* ventures to be facetious in an elephantine way over the "American Hay-Fever Association." This it considers an evidence of too great "differentiation of medical function," and suggests the formation of a "Bright's Disease Association," etc., etc. We would inform our insulated and phlebotomistic contemporary that the association thus scornfully criticised is not a medical or scientific body, but is made up of sufferers from hay fever, who meet annually, in order, we are informed, to compare therapeutics.

THE GERMAN PHARMACOPŒIA.—The German Apothecaries' Society held its annual meeting at Wiesbaden recently, and appointed a commission to revise the Pharmacopœia Germanica Editio II.

A DRUGGIST SENTENCED.—A French wholesale druggist, who was accused of fraudulently substituting sulphate of cinchonidine for sulphate of quinine, which he supplied to the hospitals of Paris last autumn, has been sentenced to a year's imprisonment, to pay a fine of fifty francs, and to defray the expense of an advertisement of the judgment in a dozen French journals.

EXTIRPATION OF THE LUNG.—Dr. Domenico Biond has removed one entire lung fifty-seven different times in animals (sheep, dogs, cats, etc.), of which number thirty survived. In five instances, in which only portions of one or both lungs were extirpated, the animals all recovered. The failure, in the thirty cases of death, the experimenter attributed in great part to the neglect of proper antiseptic precautions.—*L' Union Médicale*, September 2, 1883.

THE PRICE OF QUININE.—According to the semi-annual report in *New Remedies*, quinine has within the past six months reached the lowest mark it has had for a long time. The chief cause of the depression was the competition between the European (Continental) and American manufacturers to monopolize the market in the United States, which was thereby overloaded. To realize on stock, sales had to be effected even at a loss and under compulsion, notably at one time the large amount of fifty-six thousand ounces, which were sold at auction in New York, London, and on the Continent at 195 marks per kilo. During June there suddenly appeared signs of a turning, the price advancing within a short time to 220, 240, and 250 marks. The simultaneous turn of the market permits the conclusion that there is an understanding among the manufacturers for the purpose of reducing exports to the United States, to refuse selling to speculators, to enforce higher rates for the article. Increased amounts of the cinchona bark are coming from India and Java.

A CREMATORY FOR THE VICTIMS OF YELLOW FEVER.—A crematory has been ordered built at Jurujaba, Brazil, in which the bodies of all patients dying from yellow fever at the marine hospital of St. Isabel will be cremated. This step is the result of the experiments of Dr. Friere, who has proved the existence of yellow fever germs in earth over the grave of a yellow fever patient who had been buried a year.

A PHYSICIAN TO BE EXPELLED.—At the semi-annual meeting of the New Haven County Medical Association, October 25th, the case of Dr. E. L. R. Thompson, a physician of large practice, who was recently indicted for illegal practice, was brought up. A motion that he be expelled was unanimously carried, subject to the consent of the State Medical Association.

QUARANTINING AGAINST LEPERS. — The quarantine officer of San Francisco is quarantining every vessel arriving in port having a leper on board. The vessel is released only upon the captain's giving a bond undertaking to return such leper.

THE PROPRIETARY RIGHT IN LECTURES.—A case of much interest was decided last week in the Court of Common Pleas of Philadelphia. The case was on a motion to dissolve the injunction recently granted to restrain Dr. Samuel M. Miller from publishing "An Epitome of Medicine, Surgery, and Obstetrics," in three parts, alleged to have been written by Dr. Alfred Stillé, Dr. Hayes Agnew, and Dr. R. A. F. Penrose, of the University of Pennsylvania. The complainants declared that the book was, in substance, a summary of their lectures before the medical classes at the University. Dr. Miller, they asserted, had contributed "nothing save the work of summarization and the errors to be found in the book." They never authorized the publication, and alleged that it deceived the public and tended to their financial and professional injury. Dr. Miller was formerly a student at the University. It was argued on his behalf that the matter, having been delivered at the lectures, became common property. It was urged that the students had never been notified that any right of property had been reserved, but, on the contrary, were directed to take copious notes, and the complainants had, in fact, corrected some of the proofs of their lectures that had been published in periodicals. Counsel for the complainants replied that a man has an absolute right of property in the production of his brain. Dr. Miller, it was held, had no right in law or equity to publish a book purporting to have been written by them, and to enjoy all the profits of the pretence, to the prejudice of the gentlemen whose names were used. The Court concurred in this view, and declined to dissolve the injunction.

The case involved a point somewhat similar to that raised in a suit in this city, a few years ago. A similar decision was made, viz.: that the lecturer had a proprietary right, so far as publishing goes, to his lectures.

WORK IN THE SECTIONS OF THE SOCIETY OF GERMAN NATURALISTS AND PHYSICIANS.—At the meeting of this Society, of which some account has already been given, considerable sectional work was done.

In the *Section for Pathological Anatomy*, Professor Bollinger reported the results of his experiments in the inoculation of tuberculosis. He found that milk from tuberculous cows, if injected into guinea-pigs, invariably caused tuberculosis. Bollinger declared himself unconditionally in favor of Koch's views of the specific origin of phthisis. Bollinger was warmly opposed by Recklinghausen, who took the occasion, when Friedlander exhibited specimens of the micrococci of pneumonia, to show the dangers of accepting too easily beliefs in the pathogenic powers of micro-organisms. He instanced the numerous forms of bacilli and bacteria which can be found in the dead body after various diseases. He did not think that Bollinger's experiments were conclusive. Professor Weigert, of Leipzig, stated that various inoculated substances will cause a pseudo-tubercle, but that only the tubercular virus itself will cause true tuberculosis.

In the *Section on Surgery*, Professor Küster described his new method of controlling hemorrhage by the use of antiseptic iodoform tampons. It was especially to be used in wounds of very deep arteries not easily tied, such as the vertebræ. Englisch read a paper upon peri-urethritis tuberculosa, and Maas a paper on the treatment of goitre, giving the technique of his method of operating.

The *Section on Pædiatry* was occupied chiefly with discussions and papers on the subject of tuberculosis among children.

THE SEMI-ANNUAL MEETING OF THE AMERICAN ASSOCIATION FOR THE CURE OF INEBRIATES was held last week at the Fort Hamilton Home. Delegates were present from the New England States, New Jersey, Ohio, and Pennsylvania. The opening address was delivered by Dr. Joseph Parrish, of Burlington, N. J., the president of the association. Papers were read on "The Best Mode of Presenting the Subject of Alcoholic Inebriety to the Public Attention," by Dr. T. L. Wright, of Bellefonte, O.; "The Progress of Psychology," by Dr. Bradner, of Philadelphia, and "Inebriety Increased by Legal Punishment," by Dr. T. D. Crothers, of Hartford, Conn.

YELLOW FEVER IN MEXICO.—Reports from Mexico indicate that yellow fever has prevailed much more extensively in that country than is generally known in the United States. Acting-Assistant-Surgeon Main, in a letter to Surgeon-General Hamilton, dated October 16th, says that "but few Mexican papers reach the frontier, very few people read them, and fewer still reach or are read or understood in the United States." He reports that the disease continues to be quite fatal in the following named towns: Tabasco, Campeche, Progresso, Culiacan, Mazatlan, La Paz, Presidio, Concordia, Coraco, Qualian, Mazanillo, Mazallan, and towns south and west of the latter places. There were 521 deaths at Mazatlan up to the 8th of October, and 381 deaths out of 3,000 cases in the State of Jalisco in ninety-two days. He says that Matamoras, Tampico, and Luxham are free from the fever, and that these places have modified their quarantine restrictions, requiring only eight days against Vera Cruz, but continue the twenty days' quarantine against Havana. He accounts for the latter cities' escape from yellow fever to be entirely due to their rigid quarantine and careful sanitary regulations. Reports from Havana up to the 20th of October, received by the Marine Hospital Service from Sanitary Inspector Burgess, show a slight decrease of yellow fever at that port, eighteen deaths having occurred during the week. Nine vessels bound for United States ports were inspected, four of which required disinfection. One, the bark Neuvo Lautaro, bound for New Orleans, had two cases of yellow fever on board during her stay of forty-five days at Havana, both of which recovered and sailed with their ship. Reports from Vera Cruz, through Sanitary Inspector Mainegra, indicate that the disease is rapidly disappearing from that section. He inspected and fumigated three vessels bound to United States ports during the week ending October 10th, and all sailed in good condition. Sanitary Inspector Chesley, at Benson, Arizona, and Sanitary Inspector Price, at Yuma, Arizona, report no further appearance of yellow fever northward, and they have both been relieved from duty and the quarantine at those places raised.

Reports of Societies.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 5, 1883.

ROBERT F. WEIR, M.D., PRESIDENT, IN THE CHAIR.

DR. A. A. SMITH read the report of a case in which death occurred a week after giving chloroform and apparently as the result of the anæsthetic.

DR. W. T. BULL presented a specimen illustrating

SARCOMA OF THE TERMINAL PHALANX OF THE SECOND TOE.

The patient had suffered from pain in the toe for some time. It was finally amputated by Dr. Bull. The following is the pathological report upon it by Dr. Ferguson:

Amputation of the second toe of the left foot at the phalangio-metatarsal joint; in a male aged thirty-eight. The toe is surrounded by normal skin and the nail is normal in position and structure. The extremity of the toe is club-shaped, with a circumference of two and one-half inches, while the circumferential measure of the toe at the middle of the second phalanx is only one and three-fourths inch. A section through the toe longitudinally in the median line reveals a tumor occupying the site of the third phalanx, spheroidal in shape, and half an inch in diameter. The joint between the second and third phalangeal bones is normal. There remains at the base of the third phalanx a thin plate of bone covered by normal cartilage. To the dorsal aspect of this plate is attached the extensor tendon in its normal location. On the palmar aspect of the tumor there is a very thin, bony plate to which is attached the tendon of the flexor of the toe. Between the tumor and the nail there is a thin layer of normal tissue about a line in thickness. On the palmar aspect of the toe the skin and subcutaneous tissue are normal, except at the periphery of the tumor, where the subcutaneous tissue is more vascular, the vessels being surrounded by areas of small round cells. Generally the tumor is sharply circumscribed, and by the uniform pressure exerted on the tissues at the periphery of the tumor it seems in places limited by a fibrous capsule. In other places, however, it is not so sharply defined, and areas of considerable size are seen composed of cells not to be differentiated from the tumor structure; these areas are separated from the tumor by broad bands of fibrous tissue, which exist normally in this location. The tumor is composed of small round cells and a few spindle cells, separated by a very small amount of intercellular substance. There are broad bands of fibrillated tissue, containing spindle cells, radiating from its centre to its periphery. In places there are small areas of fibrin with a few round and spindle cells, possibly the seats of old hemorrhages; there is no recent hemorrhage. There are fragments of bone throughout the tumor. The vascular channels are abundant, quite large, and everywhere limited by the structure of the tumor, the vessels having no distinct walls of their own. There are no giant cells. Diagnosis, small round-celled sarcoma.

In the discussion THE PRESIDENT said that eighteen months ago he presented at another society two instances of tumors occurring on the terminal phalanx of the toe. One of these was a sarcoma the size of a pea, growing beneath the nail of the second toe and causing great pain. Amputation of the toe was resorted to. The second was an epithelioma which commenced under the nail of the great toe and developed to the size of a quarter of a dollar. Amputation was resorted to. These affections are very rare.

DR. C. S. WARD related a case of

PRURITUS VULVÆ DUE TO ULCER OF THE RECTUM.

About six weeks ago a lady came in from Newport for medical advice. She stated that for a long time she had suffered from the most intense pruritus of the vulva. This was a source of so much distress at night that she had walked the house for hours. On examining the vulva no evidence of irritation was discovered. She was then anæsthetized and the rectum examined. Just above the sphincter was seen an ulcer about the size of a quarter of a dollar. Nitric acid was thoroughly applied to the spot and she very quickly recovered. The patient had had some pain after defecation, but nothing very noticeable.

DR. JAMES B. HUNTER related a case illustrating the

VALUE OF LEITER'S COILS IN THE TREATMENT OF PERITONITIS.

A young married lady, in perfect health, while bathing in the surf, was thrown with some violence against a post, striking the right arm and side. This was August 1st. The next day she suffered pain in the arm and a little soreness in the right side, but did not keep her bed. When first seen, on the sixth day, she was unable to move in bed without much pain in the right side of the abdomen, and she had extreme tenderness over a distinctly circumscribed space. She said the pain had been increasing every day since the accident. There was not the slightest discoloration or appearance of a bruise on any part of the body except the arm. There was some vomiting, with constipation, and tympanites. The temperature was 103° and the pulse 110. An enema was given to relieve the bowels, and aconite, followed by quinine, the latter drug was given in five-grain doses every two hours, but the temperature continued to rise steadily until it reached 105°, where it remained in spite of quinine, cold-sponging, and ice-bags on the head, for thirty-six hours. The evidences of peritonitis being confined to one side, a Leiter's coil, six inches in diameter, was placed on the side, and firmly bound there by a roller bandage. In four hours after the application of the coil, with a current of ice-water passing through it, the temperature had fallen to 102°, and in eight hours to 100°. The temperature of the water passing through the coil was increased to about 50°, and in twelve hours from its application the patient's temperature had fallen to 99°. The coil was removed, and in three hours the temperature went up to 103°. The coil was replaced, and it again fell to 99°. A second time, after twelve hours, the same experiment was tried, with the same result, the temperature reaching 103½°, and having an evident upward tendency. With these exceptions the coil was in position for two days and nights, after which time its removal was followed by a rise of only a degree, and its use was discontinued, the patient making a good but slow recovery. Ice-bags to the head were used at the same time with the coil. The water passing through the tube was sometimes ice-cold and sometimes only about 50°. The patient found the coil agreeable, and disliked to have it removed. The sensation of cold was decidedly pleasant the greater part of the time. When it was not so, the lump of ice was taken out of the bucket that supplied the coil, and the effect was no longer complained of. A soft handkerchief twice folded was placed between the lead coil and the skin. There was good reason to believe that an attack of general peritonitis was prevented in this case by the method adopted for reducing the temperature. Its use earlier would probably have saved the patient several days of suffering.

DR. C. S. WARD said that he was a great believer in this method of reducing the temperature. It was easily applied, was grateful to the patient, and the symptoms were mitigated, if not cut short. A great deal depended upon using it early.

DR. SAMUEL SEXTON reported some cases showing that there was a

RHEUMATIC ELEMENT IN CERTAIN AURAL TROUBLES.

He had noticed for several years a class of aural cases where the inflammation had not been very great, where

there was some redness of the drumhead, some deafness, and a feeling of stuffiness in the ear, but no pain. These symptoms had always been associated with a very severe "cold" in the head, which seemed to account for them. They had been usually in persons from thirty-five to forty-five years of age. Recently he had had a patient with a history of this kind, also with a history of rheumatism. He remembered that a London physician, Dr. Harvey, had said that rheumatic troubles sometimes affected the ear. By putting his patient under a treatment suitable to his rheumatic condition in addition to the management of the local conditions, which might vary somewhat in each case, there was very rapid improvement.

Dr. Sexton thought that a morbid condition of the ear might very often be noticed in rheumatic patients, but his recollection was that the cases reported by the London physician were chronic manifestations, whereas his own were subacute.

The PRESIDENT said that he had himself observed half a dozen cases of this kind.

DR. W. T. LUSK related the history of a case illustrating the

VALUE OF THE FORCEPS IN BREECH PRESENTATION.

The patient was seen by Dr. Lusk in consultation with Dr. F. A. Castle. She had been married seven years and was thirty-two years of age. The six years of sterility had been due to anteflexion and cervical stenosis. Dr. Castle had treated these conditions by dilatation, and pregnancy had followed. From the beginning the labor-pains were feeble, and the dilatation was dilatory. The child presented by the breech. Both extremities were reflected upward. The failure of all uterine action rendered artificial extraction necessary. Hooking the index fingers into the anterior and posterior thighs, was tried by both Dr. Castle and himself but without practical results. He then suggested forceps. An ordinary pair of the Simpson pattern were applied, with one blade over the sacrum, and with the other over the posterior surface of the opposing thigh. At the time of the application, the dilatation of the cervix was very nearly, but not quite complete, and the breech, though in the cavity, was at some distance from the perineum. The forceps held firmly. Little by little the breech was brought to the perineum and made to dilate the vulva. In the course of fifteen minutes from the beginning of the operation the woman was delivered of an eight-pound living child. An insignificant abrasion of the abdomen, which healed quickly, was the sole lesion inflicted by the forceps. Subsequently Dr. Castle found in the uterine walls, partly accounting for the tardiness of the labor, a number of small imbedded fibroids.

THE PRESIDENT related the history of a case illustrating the

DANGER ATTACHED TO THE USE OF THE RED SOFT CATHETER.

During the present week two cases of empyema had been changed from the medical to the surgical side of the New York Hospital, for the purpose of removing fluid from the pleural cavity.

In the first case, a trocar and canula arranged like a tracheotomy tube were driven through an intercostal space in the axillary line. After the trocar had been withdrawn, the canula was attached to a piece of rubber tubing, which was carried into a closed bag partially filled with antiseptic sponges.

It was proposed that the second case should be treated in a somewhat similar manner. After the case was brought in, however, it was found that the second trocar had a sharp end and he was unwilling to leave it in situ. He was therefore obliged to remove the tube after having passed through it a small, red rubber catheter, previously unused, which was passed into the chest and secured by a suture passed through it and the adjacent skin, so that it could not slip in or out. The external end was confined in a sponge-bag filled with antiseptic fluid. Next morning it was reported that the outer end of the catheter had broken off and that the inner end had slipped into the pleural cavity. He made an incision, opened the chest, and extracted it from alongside the spine.

The catheter that he had used was smaller than he would have otherwise employed, though while in it successfully drained off fifty-eight ounces of pus. The main point of interest was that it was one of the soft red rubber catheters, and these instruments are made red and particularly smooth by using red sulphuret of antimony. It was this which caused the white film that forms on the outside of them, and makes them after a short time hard and brittle by over-vulcanizing them. For this cause the not very rare accident occurs of their breaking in the urethra—though where the softening and swelling of the catheter prior to a break occurs, it is more likely due to an alkaline urine. Dr. Weir thought that the imported catheters were even worse than the domestic in this respect. The patient above referred to was not harmed but perhaps benefited by this free incision forced upon him.

DR. BULL said that he did not think that catheters need be used at all in these cases, and it was better to discard them altogether. They are not made of durable materials, their walls are soft, and they are liable to be pushed in too far, or in the wrong direction. We have all that is necessary in the drainage-tube.

Dr. Bull related the history of a case in which an aspirator needle was broken off and about three inches of it left in the pleural cavity. Nothing was done and the patient got well.

DR. G. F. SHRADY referred to a similar instance with equally good results from the non-interference.

The Society then adjourned.

Correspondence.

OUR PARIS LETTER.

MIGUEL ON THE ASEPTIC ACTION OF CERTAIN CHEMICAL SUBSTANCES ON THE INFERIOR ORGANISMS.

PARIS, October 12, 1883.

IN a work published last year by Dr. S. Miguel entitled "Les Organismes vivants de l'Atmosphère," the author gives an account of the aseptic action of certain chemical substances on the inferior organisms termed bacteria. Dr. Miguel has since directed his attention to the study of other disinfectants, among which are included several powerful microbicides, and he has recently published the following table of the substances he experimented with, giving the weight in grammes, or fractions of grammes, of each substance capable of rendering imputrescible one litre of "bouillon," or beef-tea: Biniodide of mercury, 0.025; iodide of silver, 0.03; oxygenated water, 0.05; bichloride of mercury, 0.07; nitrate of silver, 0.08; osmic acid, 0.15; chromic acid, 0.20; iodine, 0.25; chlorine, 0.25; hydrocyanic acid, 0.40; bromine, 0.60; chloroform, 0.80; sulphate of copper, 0.90; salicylic acid, 1.00; benzoic acid, 1.10; chromate of potassium, 1.30; picric acid, 1.30; ammoniacal gas, 1.40; thymic acid, 2.00; chlorides of lead, cobalt, and nickel, 2.10; mineral acids, 2.00 to 3.00; binitrobenzine, 2.60; essence of bitter almonds, 3.00; carbolic acid, 3.20; permanganate of potassium, 3.50; aniline, 4.00; divers alums, 4.50; tannin, 4.80; sulphydrate of sodium, 5.00; arsenious acid, 6.00; boric acid, 7.50; hydrate of chloral, 9.50; salicylate of soda, 10.00; sulphate of the protoxide of iron, 11.00; amylic alcohol, 14.00; sulphuric ether, 22.00; butylic alcohol, 35.00; propylic alcohol, 60.00; borate of soda (borax), 70.00; ethylic alcohol, 95.00; sulphocyanide of potassium,

120.00; iodide of potassium, 140.00; prussiate of potash, 185.00; glycerine (officinal), 225.00; urea (natural), 260.00; hyposulphite of soda, 275.00; chlorate of soda, 400.00.

From the above list it may be seen that the biniodide of mercury takes the lead, and is capable of arresting the putrefaction of beef-tea at a strength of $\frac{1}{400,000}$, that is to say, one thousand times less than that of crystallized carbolic acid. The latter, which is reported to possess such powerful antiseptic properties, occupies a rather low position in the list, thymic acid being a great deal stronger. This being the case thymic acid might with advantage supplant the use of carbolic acid, which, besides its disagreeable odor, is so eminently toxic. A great number of the substances named have had aseptic properties attributed to them to a much higher degree than they were entitled to, but the above list gives them their proper place. Such, for instance, are chloral hydrate, salicylate of soda, the alcohols, borax, and the hyposulphite of soda. With regard to the last named substance, Dr. Miguel remarks that when mixed with some of the compound metallic disinfectants it has the curious faculty of considerably attenuating their microbicide properties. The antiputrescent properties of some of the essential oils have also been greatly exaggerated, the most popular of which are turpentine, lavender, aniseed, lemon, wintergreen, which, when added to animal fluids, do not stop putrefaction. Camphor and the mineral oils are in the same case, and Dr. Miguel explains this deficiency of the aseptic power of the substances of this class to their little solubility in water, the usual vehicle of putrescible matters.

The fatty alcohols and the hydrocarburets of the aromatic series are also, for the same reason, but poor disinfectants, although theoretically one would be led to suppose that they possessed highly antiputrid qualities. Certain perfumes, extracts of flowers, eau de cologne, etc., have little effect upon the microbes unless the liquids with which they are mixed contain a minimum of one-tenth of absolute alcohol. Aromatic and other vinegars possess, on the contrary, aseptic properties more precious in the sense that they prevent the development of bacteria in the media where pure acetic acid is not diluted to more than one-three-hundredth.

The proportions given in the above table represent the minimum quantities, which by experiment have been proved to be sufficient to prevent or suspend putrefaction, but for greater security Dr. Miguel recommends the dose to be doubled. From its high position as an antiseptic and in an economical point of view, corrosive sublimate certainly deserves more extensive application than it at present obtains, as a solution of $\frac{1}{10000}$ is sufficient for ordinary prophylactic purposes, such as the washing of the hands before and after dissections, operations, and in most cases where such substances as borax or carbolic acid would be employed.

The substances referred to up till now act by paralyzing the evolution of the microbic germs and by destroying the adult bacteria, but they have no effect on the germs of the bacteria. Certain substances, however, have, by their chemical action, the power of completely destroying the germs of the bacteria, and to this class Dr. Miguel has applied the term "sporicides." The principal among these are the preparations of mercury and the salts of silver which in a solution of $\frac{1}{10000}$ destroy in a few days the germs of microbes as surely as a dry temperature of 150° C. prolonged during several hours. Iodine, chlorine, and bromine, and the mineral acids come next. Sulphate of copper, so much vaunted as a microbicide, possesses this property only to a very limited extent, that is, it prevents the development of the microbes, but has no effect whatever on the germs themselves. But the microbicide "par excellence" is heat, which, raised to 110° C. for liquids, and to above 150° C. for solids, has been found sufficient effectually to destroy the germs of the microbes.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

To the Editor of The Medical Record.

Dear Sir: Northern Dakota might be aptly called a cereal paradise. Yet partial nature has smiled upon its rolling prairies in a rather one-sided way. For miles and miles, stretching out endlessly to the far horizon the eye rests upon nothing but fertile plains. But there is a dead-level sameness about the scene that presently palls upon the sight. It is true, at first the astonished gaze receives a pleasant shock of newness in the boundless expanse of undulating golden wheat-fields. But it is all unrelieved by hill-top, tree, or river, so that the very vastness of this seeming ocean soon wearies through perpetual monotony. But while there is a lack of changeful romance in the scene, and picturesqueness too, is only conspicuous by absence, the thought rises imperative, that bounteous nature has here bestowed a gift of soil and climate that even now is a great blessing to thousands, and may, if judiciously managed, prove the same to untold thousands more. The unsurpassed fertility of the soil in this region appears to be due to a large deposit of vegetable mould over its surface. This invaluable accumulation varies in depth from two to six feet. A recognized authority in agricultural affairs has written the following, which seems no exaggeration of facts: "In view of the formation, extent, richness, and importance of the vegetable mould of our Northwestern prairies, it is established to a certainty that the United States is in possession of one of the greatest treasures in existence, which is not surpassed in value and importance by all the precious metals in the bowels of the earth."

An easily understood experience, but one not free from dangerous tendencies, is the brilliant success that has already attended the monopolist efforts of the so-called bonanza farms. The grand scale upon which wheat-growing is there conducted by a few enterprising men, threatens to speedily place the independent small farmer without the pale of possible competition. Before the surpassing agricultural interest of Dakota all other topics sink into comparative insignificance. Thus purely medical matters wear no specific features that might serve to distinguish the professional life of this vast territory from that of the new Northwest generally.

Fargo bustling with life and activity, where the electric light and horse-car have already entered and look as though they meant to stay; Jamestown, bright, cheerful, growing and spreading almost as you look upon it; Bismarck, the newly chosen capital of the territory, pleasantly and advantageously situated on the eastern bank of the Missouri, more substantial and sedate in appearance, as becomes its recently acquired dignity and importance; then Mandan, just beyond the great Missouri River bridge—Mandan which two years ago was but an Indian settlement, and is proud to-day of a white population numbering two thousand aspiring, ambitious, pushing heads—all these places, and many smaller ones, too numerous for mention, offer the competent practitioner of some experience a rather liberal reward for steady professional work. He must be quite familiar, however, with the various affections that a sturdy race of hard-working men are liable to, in spite of unusually healthful surroundings. Surgical skill is likewise requisite in some degree. The obstetrical forceps, guided by a steady hand, must find the right path and lock quickly.

At any rate it must not be too boldly employed as an effective perineal scythe. Moreover, the new doctor must be able to distinguish the sex of a catheter almost at the first glance. He must know how to examine a delicate, shrinking girl's tongue, without spoiling her prospects of language. He must not say an infant is "only teething," when it is only just dying of meningitis. Nor must he gravely speak of an affection of the lungs after a prolonged and painstaking auscultation of the liver. In a word, in addition to certain indispensable prerequisites, such as the ability to write at least three prescriptions

for one cough, he must be master of various minor accomplishments that your recent biannual graduate notoriously does not possess.

But quite seriously, as regards many of the filth-engendered pestilences of the metropolis, a sound ignorance of such maladies would seem to be, if not an aid, at least no hindrance to practice. From all of which it is apparent that while a man need not necessarily be a runner or racer in his profession, he must nevertheless be enough of a pedestrian to enable him to walk securely. But, by all means, let him first learn to stand on his own feet; for those intellectual appendages are not to be borrowed for love or money in the frontier towns of the new Northwest.

Before reaching Montana, an excellent view was had of a very remarkable region known as the Bad Lands. The peculiarity and grotesqueness of the many colored mounds and fanciful buttes that are there tumbled about haphazard for a distance of many miles, baffle all description. It is a scene that, following so closely upon the picture of abundance above alluded to, impresses one with a somewhat oppressive sense of waste and sterility. Nevertheless, the soil between the weird formations of the Bad Lands is said to possess excellent fertilizing purposes. Of course, the medical mind detects in these corrugated projections and bulging irregular formations, only multiple neoplasms on suffering nature's fair integument. One can easily fancy, scampering through these strange hills and valleys, herds of buffalo with the screaming red man in wild pursuit. However, all such fancies remain but pictures of the bewildered mind. For the buffalo has been recklessly slaughtered or driven away, and the Indian following, is compelled to live in reservations. So that at present the traveller feels constrained to lament the absence of both. They seem positively to belong there to complete the picture.

Into the formation of the territory of Montana there enters mountain, lake, and prairie, thus interesting the eye by a changeful scenery that has many elements of beauty. The average elevation very nearly approaches four thousand feet, and the climate possesses health-giving qualities. Severe winters are the rule, but the people apparently suffer less, and certainly complain much less of the cold, than is the rule with us.

If Dakota was styled a cereal paradise, Montana may justly claim the title of the Paradise of Miners. Glendive, Miles City, Billings, Livingston, Bozeman, Helena, and Missoula all make the impression of thriving places that mean to become still more prosperous in the near future. In most of these towns the cowboy is a feature, an institution, or an ever-present entity that may not be ignored. The first specimen of this numerous class elicits awe and admiration from the tenderfoot. Yes, the first cowboy is a decidedly imposing spectacle. After a while, however, he seems less grand, less picturesque, more human, and more dirty.

His physique is certainly good; powerful muscles, with plenty of solid bone to support them; a rather picturesque attire; a well-browned complexion; a reliable knife and pistol, under control of an unreliable temper, and often beyond it; a hardy horse or pony; finally, an antecedent history of whiskey, cards, and illiteracy. Such is the cowboy as he appears to the prejudices, perhaps, of an eastern observer. At any rate he scarcely improves upon more intimate acquaintance. He habitually chews vile tobacco, smells of viler liquor, and uses the vilest language.

Altogether he would seem to possess those delightful qualities that grace the successful metropolitan alderman, or some similarly accomplished politician. And now for the Indian. West of St. Paul, representatives of many different tribes begin to appear with rather startling frequency. The unpractised eye detects few differences amid a general similarity of shabby pride, deceitful cunning, stolid indifference except to bargains, and unwashed redness. Yet the knowing scout or grasping agent will promptly inform you that there exist among the various tribes and nations, differences in language, or at least dialect, manners, habits, and beliefs, as well marked and deep seated as any that characterize the civilized peoples of the globe.

Sitting Bull, of infamous fame, when interviewed by your correspondent, was suffering from cephalalgia and an acute exacerbation of a chronic naso-pharyngeal catarrh. The choice Sioux in which this interesting information was conveyed to the admiring writer was interrupted by hideous grimaces, snorts, and snifflings quite touching to contemplate. Once a dangerous brigand, in whose restless, wandering eye fierce hatred of the white man still lurks, as if in ambush, his present occupation seems to be that of an innocent, peace-loving, autograph-writing society-lion. A strangely suggestive spectacle, nevertheless, to see the scion of European nobility hand-shaking with the chieftain of a dying race of savages. In that momentary grasp both may be dimly conscious of the levelling tendencies of our modern civilization, which pauses not in its destructive march onward and upward, till a plateau is reached where no prerogative exists, and only those fit to survive may rule themselves, their own sovereigns.

At Graycliff, a spot about midway between Billings and Livingston, the Crow Indians had turned out in great force to the number of about two thousand. Here a weird scene of wild excitement was enacted. It was a war-dance of the braves. Impossible to do justice to the fantastic costumes, the exultant whoops and shouts, the spasmodic gesticulations of gaudily painted nakedness that constituted the acute delirium of this extraordinary recurrent dance. It may sound incredible, but it is yet quite true, that the picturesque brokers at our stock exchanges are not much more noisy, and apparently demented, in their hyperbolic frenzy of speculative transaction than these poor uncivilized, down-trodden savages in the gyrations of a war-dance.

Ample opportunity was here afforded your correspondent to note some strictly professional matters. To begin with, the average Crow Indian is taller and more slim than the pale-face. Robust types of perfect physical manhood are rare. Womanhood is represented by spare squaws and sparer maidens. Not a single example of comfortably helpless obesity was discoverable. In fact, your mean Indian apparently glides through life without any adipose tissue at all. Consequently he never dies of a fatty heart.

The Indian bones are thin, not clumsy; the muscles have a wiry look and feel. They impart a sense of great power of resistance to fatigue. The absolute force of the Indian buck seems comparatively small, but the possibility of continuous steady effort is implied in his make-up. He could scarcely perform very trying labor; and yet where moderate strength is required he would not easily give out, outlasting probably the Caucasian and Chinaman.

A rather large proportion of Indians are pock-marked. Indeed, the notorious ravages of small-pox among these unvaccinated people constitutes an unanswerable argument in favor of compulsory vaccination. Syphilis appears to be no rarity among them. The writer saw numerous instances where this scourge had left indelible imprints on the bodies of its victims. Scrofula is apparently of equal frequency. Suppurating cervical glands, blear-eyes, and other characteristic signs are seen on many a fretful papoose and moping adolescent. Altogether, look at these Indians from what point of view you will, the conviction forces itself upon you that they are a degenerate and degenerating race which must needs suffer extermination at the hands of inexorably progressive civilization. Whatever else manifest destiny may signify, for the Indian it means the doom of inevitable extinction. Soon they will live nowhere on earth save in the traditions of the poet, or the colder remembrance of the historian. And let us own that fate is no more cruel to them than to inferiority generally, in a world where superiority alone escapes dripping through the narrowing sieve of competitive life. This letter has already exceeded the limit intended for it. Your corre-

spondent is, therefore, constrained to reserve for a final one a few remarks about Washington and Oregon, and the Yellowstone National Park.

Very respectfully yours,

EDMUND C. WENDT.

136 WEST THIRTY-FOURTH STREET, NEW YORK, October 29, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 20 to October 27, 1883.

MOORE, JOHN, Lieutenant-Colonel and Assistant Medical Purveyor. To be relieved from duty as Medical Director, Headquarters Department of the Columbia, to proceed to San Francisco, Cal., and assume charge of the medical purveying depot in that city. S. O. 243, par. 10, A. G. O., October 24, 1883.

HORTON, S. M., Major and Surgeon. Leave of absence for one month, with permission to apply for an extension of three months. S. O. 216, par. 6, Department of the Missouri, October 20, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Granted leave of absence for one month. S. O. 201, par. 6, Department of the East, October 24, 1883.

BARNETT, RICHARDS, Captain and Assistant-Surgeon. Assigned to duty at Columbus Barracks, Columbus, O. S. O. 240, par. 1, A. G. O., October 20, 1883.

MERRILL, J. C., Captain and Assistant-Surgeon. Granted leave of absence for one month. S. O. 201, par. 7, Department of the East, October 24, 1883.

MAUS, LOUIS M., Captain and Assistant-Surgeon. Assigned to duty at Fort A. Lincoln, D. T. S. O. 180, par. 4, Department of Dakota, October 15, 1883.

Official List of Changes of Stations and Duties of Medical Officers of the United States Marine Hospital Service, from July 1, 1883, to September 30, 1883.

BAILHACHE, P. H., Surgeon. Detailed as member of board to examine candidates for promotion, August 23, 1883. Detailed as Surgeon-in-charge, Cape Charles Quarantine Station, September 5, 1883.

MILLER, T. W., Surgeon. Granted leave of absence for twenty-five days, August 31, 1883.

WYMAN, WALTER, Surgeon. Detailed as member of board to examine candidates for promotion, Aug. 23,1883.

LONG, W. H., Surgeon. Granted leave of absence for twenty days, September 25, 1883.

SMITH, HENRY, Surgeon. Directed to take charge of quarantine service at the Capes, July 29, 1883.

STONER, G. W., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 24, 1883. To inspect the relief stations along the coast of Maine, September 29, 1883.

GOLDSBOROUGH, C. B., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 29, 1883.

BANKS, C. E., Assistant Surgeon. Relieved from duty at Portland, Or., and to report to the Surgeon-General at Washington, July 10, 1883.

CARMICHAEL, D. A., Assistant Surgeon. Granted leave of absence for ten days, August 31, 1883.

PECKHAM, C. T., Assistant Surgeon. To proceed to Portland, Me., for temporary duty, August 25, 1883.

DEVAN, S. C., Assistant Surgeon. To proceed to Portland, Or., and assume charge of the service, September 11, 1883.

KALLOCH, P. C., Assistant Surgeon. To proceed to Philadelphia, Pa., for temporary duty, July 25, 1883. To rejoin his station (New York), July 31, 1883.

YEMANS, H. W., Assistant Surgeon. Relieved from duty at Sitka, Alaska, and to proceed to Portland, Or., for temporary duty, July 10, 1883. To proceed to San Francisco, California, reporting for duty to Surgeon Vansant, September 11, 1883.

GLENNAN, A. H., Assistant Surgeon. To remain at Norfolk, Va., until further orders, July 29, 1883.

WASDIN, EUGENE, Assistant Surgeon. To proceed to New Orleans, La., for temporary duty, August 2, 1883. To proceed to Mobile, Ala., for temporary duty, August 27, 1883. To rejoin his station (New Orleans) as soon as practicable, September 25, 1883.

GUITÉRAS, JOHN, Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury, from September 1, 1883; August 31, 1883.

WHEELER, W. A., Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon by the Secretary of the Treasury, from September 1, 1883; August 31, 1883.

O'CONNOR, F. J., Assistant Surgeon. Resignation accepted by the Secretary of the Treasury, to take effect August 1, 1883; August 2, 1883.

WASDIN, EUGENE, M.D., of South Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, August 2, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending October 27, 1883.

VAN REYPEN, W. K., Surgeon. Detached from the Naval Hospital, New York, and ordered to the U. S. Ship Powhatan.

WELLS, H. M., Surgeon. Detached from the Naval Laboratory, New York, and ordered to the Naval Hospital, New York.

GORGAS, A. C., Medical Inspector. Orders modified so that he will be detached from the Naval Hospital, Chelsea, Mass., on December 10th, instead of November 10th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending October 30, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 23, 1883.....	0	59	45	1	13	38	0	0
October 30, 1883.....	1	61	55	6	29	43	0	0
Deaths.								
October 23, 1883.....	0	20	12	1	2	20	0	0
October 30, 1883.....	0	22	9	5	7	28	0	0

THE VERMONT STATE MEDICAL SOCIETY held its annual session at Montpelier, October 11th and 12th, about fifty physicians being present. Papers were read by Dr. O. W. Sherwin, on "Jaundice;" by Dr. L. M. Bingham, "Dilatation of the Œsophagus;" Dr. E. R. Campbell, on "Hernia;" Dr. S. J. Allen, on "A New Method of Localizing Bullets;" Dr. S. T. Brooks, on "Duties and Rights of Experts;" Dr. O. W. Sherwin, on "Physicians' Testimonials;" Dr. John B. Wheeler, on "Venesection." The following officers were elected for the ensuing year: *President*—S. S. Clark, St. Albans; *Vice-President*—C. M. Rugg, Hartland; *Secretary*—J. S. Richmond, Woodstock; *Treasurer*—Sumner Putnam, Montpelier; *Auditor*—C. M. Chandler, Montpelier; *Delegates appointed to attend American Association*—Drs. C. M. Chandler, Montpelier; C. L. Allen, Rutland; L. M. Bingham, Burlington; E. F. Upham, Randolph.

THE EPIDEMICS AT THE NEW YORK INFANT ASYLUM AND THE REPORT OF THE MEDICAL BOARD.

In view of the frequent sensational newspaper reports of the recent epidemics at the Mount Vernon branch of the New York Infant Asylum, and on account of certain partial statements in the medical press, the following report is made public:

To the Board of Managers of the New York Infant Asylum:

Pursuant to the request of the Medical Board, we, the visiting physicians of the Mount Vernon Branch, respectfully submit the following report of the history and management of the epidemics of measles, whooping-cough, and diphtheria recently prevailing there:

Whooping-cough existed during July and August. Up to this time there have been 83 cases of that disease, and 17 deaths from it. Every one of these 17, however, also had measles. Measles appeared early in August, and the following is the tabular statement of our experience with that disease:

Children in the institution August 1st	224
Received subsequently	12
	236
Number of individuals who had measles	203
Number of children who escaped	33

The recurrences of the rash, with all the accompanying symptoms of the disease, was a marked feature.

124 had measles twice	248	cases.
34 had measles thrice	102	"
1 had measles five times	5	"
44 had measles once	44	"
3 (adults) had measles once	3	"
Total measles	402	"
Whooping-cough	83	"
Diphtheria	10	"
Entero-colitis	70	"
Total in asylum	565	"

Deaths.

Measles alone	none.
Diphtheria, complicated and convalescent from measles	6
Measles, complicated with whooping-cough, pneumonia, entero-colitis, etc.	48
Total	54

Since August 1st there have also been 18 deaths in children, showing no symptoms of either measles, whooping-cough, or diphtheria, as follows: Pyæmia, 1; dysentery, 4; phthisis, 2; marasmus, 1; bronchitis and inanition, 1; capillary bronchitis, with catarrhal enteritis, 1; acute meningitis, 2; cholera infantum, 6 18

Total	72
Per cent. of inmates (children)	30.51
Per cent. of cases of all diseases	12.75
Per cent. of complicated measle cases	11.93

The average mortality, according to the best authorities is, of

Measles	12	per cent.
Diphtheria	31	"
Diphtheria, complicated with whooping-cough	95	"

Rilliet and Barthez report an epidemic of measles occurring in an hospital where the mortality was over sixty-seven per cent.

The complications causing death were as follows: Broncho-pneumonia, croupous pneumonia, capillary bronchitis, bronchitis, acute meningitis, whooping-cough, diphtheria, entero-colitis.

In view of the severity of the diseases with which the Home has been afflicted, and on account of the harsh and unscientific criticism to which the general management has been subjected, a somewhat detailed statement may not be out of place.

While there appear to be several sources from which the diseases were introduced to the asylum, there is no certainty respecting any of them. It is sufficient for us to remember that it is a common experience in similar institutions, and that when one of these contagious affections prevails, the others are pretty sure soon to appear. It is a recognized fact among authorities, with respect to whooping-cough, measles, and diphtheria, that, given an epidemic of one of them, the others will ensue and complicate the results. The rule is for whooping-cough to appear first, this to be followed by measles, and finally, toward the decline of the first two, diphtheria comes in a relatively small proportion of cases. This sequence is exactly what we have experienced at Mount Vernon.

The Home at Mount Vernon is attractively situated upon an elevated site on the White Plains turnpike. It consists of a large main building and five outlying cottages, besides an old residence. The main building is three stories high, and is used for the quarters of the resident officers (matrons and physicians), drug store, parlors, etc. It contains also four wards, three large, about 75x 20 feet, and one smaller. The cottages, with one exception, are two stories high; one is three. There is also a "Sanitarium," or play-room; a one-story cottage inclosed with glass. In every instance except one there is only one room on a floor, constituting a ward, and accommodating from ten to thirty children.

The regularly appointed visiting physicians were Drs. Ripley and Conant. The former found it inconvenient to officiate, and resigned. The latter made several visits to the asylum during this epidemic, when he was called out of town to attend a sick relative; he subsequently resigned. At the request of the President of the Board of Managers, Dr. E. A. Goodridge, of Flushing, one of the managers, kindly consented to act *ad interim*. In the meantime, Dr. Caroline Marr, the resident physician, had had frequent and timely aid and counsel, we learn, from Drs. Joel Foster, Blakeman, and Burrall, members of the Executive Committee of the Board of Managers. Dr. F. M. Warner, formerly resident physician at the Nursery and Child's Hospital, was appointed attending physician about September 25th, and since October 3d has been making daily visits.

At the request of the Medical Board, Dr. Fowler, who is attached only to the Sixty-first Street branch, cooperated with Dr. Warner, and has visited the asylum with him almost every day since October 5th.

On October 10th Dr. Edward Bradley, having been appointed visiting physician to fill the remaining vacancy, began his visits, and up to the present time the asylum has been regularly and faithfully attended by these three, working in perfect accord.

The conditions to overcome which we met were those growing out of the most severe epidemic of measles, whooping-cough, and diphtheria, and, above all, the practical difficulties in the way of successful isolation. That is to say, there were twelve classes of children to be kept separate: (1) Measles; (2) measles with whooping-cough; (3) whooping-cough; (4) convalescent measles; (5) doubtful whooping-cough; (6) doubtful measles; (7) those who had been exposed to measles; (8) those who had been exposed to whooping-cough; (9) diphtheria; (10) doubtful diphtheria; (11) whooping-cough and diphtheria; (12) healthy children.

Now, although we had about thirteen wards, we could in only a few instances utilize both wards of a cottage,

because occupancy of either floor would infect the other, having at one time over one hundred cases of measles on hand. Sad experience from the beginning taught us this. Then, again, one cottage was generally empty undergoing thorough disinfection. In the emergency, therefore, we erected three tents, capable of accommodating four patients each. These tents had tight board floors raised four inches from the ground, and were warmed by stoves. A thermometer was hung in each, and the temperature easily maintained at about 68° F. Into two of these tents we put our diphtheria cases. Into another the measles which cropped out among the cases afflicted with other diseases. The third tent was used as a quarantine for the physician and nurse attendant upon the diphtheria. No outside communication was allowed except that which might arise from a specially detailed attendant who delivered the meals and medicines. The sight of the tents excited the indignation of the local Board of Health, who came one night and ordered our patients removed to a cottage occupied by the farmer's family. This procedure we reversed two days afterward. Hence a conflict of authority and unfriendly reports.

At present there are six cases of acute disease in the asylum: three diphtheria, two capillary bronchitis, one measles. *No case of scarlet fever has occurred in the institution.*

Dr. A. N. Bell, the regularly appointed sanitarian, has been in constance attendance since September 29th, and has perseveringly superintended in detail all matters pertaining to isolation, disinfection, ventilation, heating, water supply, drainage, etc.

We have had four trained nurses constantly on duty, besides those regularly employed.

The house physician, Dr. Caroline G. Marr, and her assistant, Dr. Otis, merit high praise for their untiring zeal and perseverance under circumstances the most trying. So far as we have been able to judge, Dr. Marr has shown herself competent to fill her position, for which she was examined and recommended by Dr. J. Lewis Smith.

Those familiar with the statistics of similar epidemics will see that our mortality has been under the average.

In our opinion, the total mortality is not excessive when we consider the following points: The epidemic was in an asylum; measles of a severe type supervened in children already debilitated and still crippled by the lung complications of whooping-cough, the remarkably frequent repetition of the measles, and, finally, the advent of malignant diphtheria.

We may be permitted to add the regret that our work, arduous though it has been, does not seem to meet the approval of the local Health Board or the coroner, all of whom persist in attempts to question our diagnosis, treatment, and general management.

Very respectfully,

GEO. B. FOWLER, M.D.,
A. N. BELL, M.D.,
E. BRADLEY, M.D.,
F. M. WARNER, M.D.
} *Attending Physicians.*

OCTOBER 25, 1883.

We, the undersigned, members of the Medical Board of the New York Infant Asylum, approve of the above report. Oren D. Pomeroy, M.D., Henry G. Piffard, M.D., J. Clarke Thomas, M.D., C. L. Dana, M.D., William J. Morton, M.D., F. H. Bosworth, M.D., J. Lewis Smith, M.D., W. R. Birdsall, M.D., H. Marion Sims, M.D., W. F. Mittendorf, M.D.

DANGER FROM FLIES.—Dr. Grassi is said (*British Medical Journal*) to have made an important, and by no means pleasant, discovery in regard to flies. It was always recognized that these insects might carry the germs of infection on their wings or feet, but it was not known that they are capable of taking in at the mouth such objects as the ova of various worms, and of discharging them again unchanged in their fæces. This point has now been established, and several striking experiments illustrate it. Dr. Grassi exposed in his laboratory a plate containing a great number of the eggs of a human parasite, the *tricocephalus dispar*. Some sheets of white paper were placed in the kitchen, which stands about ten metres from the laboratory. After some hours, the usual little spots produced by the fæces of flies were found on the paper. These spots, when examined by the microscope, were found to contain some of the eggs of the tricocephalus. Some of the flies themselves were then caught, and their intestines presented large numbers of the ova. Similar experiments with the ova of the *oxyuris vermicularis* and of the *tænia solium* afforded corresponding results. Shortly after the flies had some mouldy cream, the *oïdium lactis* was found in their fæces. Dr. Grassi mentions an innocuous and yet conclusive experiment that every one can try. Sprinkle a little lycopodium on sweetened water, and afterward examine the fæces and intestines of the flies; numerous spores will be found. As flies are by no means particular in choosing either a place to feed or a place to defecate, often selecting meat or food for the purpose, a somewhat alarming vision of possible consequences is raised. Dr. Grassi invites the attention of naturalists to the subject, and hopes that some effectual means of destroying flies may be discovered.

TANNATE OF SODIUM IN CHRONIC NEPHRITIS.—Tannate of sodium has been recommended by Lewin instead of tannin in albuminuria, in order to lessen the excretion of albumen. It has been tried by Ribbert on animals. Ribbert ligatured the renal artery in rabbits for an hour and a half and produced albuminuria. He then injected a one-half per cent. solution of tannin into the jugular vein, extirpated the kidney, and examined it microscopically. He found that much less albumen occurred in the glomeruli when tannin was employed, showing that it had lessened the excretion of albumen. A similar result was obtained with tannate of sodium, and in his experiments with this substance the albumen was generally completely absent from the glomeruli. Dr. Briese has tried the tannate of sodium upon patients suffering from chronic albuminuria. He finds that some patients bear it well, and can take it for a month without any disagreeable consequences, while others vomit after every dose, and in others again the stomach and intestine are affected in two or three days. In the four carefully observed cases which he records the tannate of sodium was of no use whatever. It did not lessen the quantity of albumen excreted, nor did it alter the course of the disease.—*Deut. Arch. f. klin. Med.*, vol. xxxiii., p. 220.

TREATMENT OF PREMATURE BALDNESS.—Dr. Lassar contends (*Berliner klin. Wochenschrift*) that premature baldness is the result of contagion, and not of any general condition of the health. The method of treatment recommended is as follows: The scalp is to be washed every day with tar soap, or soft glycerine soap, or with soap containing sodium iodide; the soap is to be thoroughly applied, and rubbed into the scalp for fifteen minutes. Following this, a warm douche is used; then after the application of a corrosive sublimate solution (two parts in one thousand) the hair is dried, and a half per cent. spirit solution of naphthalin is rubbed into the affected parts. Carbolic or salicylic acid may also be employed. If this treatment be adopted in the early stage, when the hair is just beginning to fall, it usually proves successful, but it must be kept up for eight weeks or more. The fact that this disease is due to a communicable morbid principle suggests that it may be conveyed by the comb and brush of the barber.

RESORCIN AS AN ANTIPYRETIC is not so good as quinine of salicylate of soda, says Dr. Sarbeck, on account of the nervous symptoms which it produces. It quickly reduces temperature and causes perspiration. It is given in fifteen-grain doses.

ACTION OF MINERAL WATERS AND OF HOT WATER UPON THE BILE.—Lewaschew and Klikowitch, from experiments upon dogs, conclude that the use of ordinary alkaline mineral waters was to increase the quantity of bile and to make it more fluid and watery. This increased flow is beneficial in clearing out any bile stagnating in the gall-bladder. A subsequent increase in the quantity of bile indicates a greater flow of bile into the gall-bladder, and this also is of service in emptying out any stagnant bile, and restoring the normal condition when this is disturbed. Artificial solutions of alkaline salts were found to have a similar action to the natural mineral waters, and, as with them, the action varies according to the concentration of the solution. Bicarbonate of sodium has a quicker, more powerful, and more lasting effect on the composition of the bile than the sulphate of sodium, and weak solutions than strong ones. Vichy was more efficacious than Carlsbad water. Hot water was found to have an effect on the bile much like that of the mineral waters.

THAT MANY ANEURISMS are the result of nervous influence is the conclusion of Dr. Lewaschew. This observer found that after constant irritation of a nerve, the middle coat of the arteries in its area of distribution became sclerosed and united to the intima, a condition exactly like that found in the development of aneurismal dilatations.

THE New York *Planet* of October 15th comes to us in a new dress, and is much improved in appearance. Its page is enlarged and the general size of the journal increased. It contains six original articles, a good report of the recent meeting of the New York Academy of Medicine, editorials, and miscellaneous news. Its editor, Dr. C. E. Nelson, has our best wishes for the success of his enterprise. The journal contains twelve double-column pages, RECORD size, and is published monthly at one dollar per year.

SUICIDE OF A NEW YORK PHYSICIAN.—Dr. Walter L. Foley, of this city, committed suicide on October 20th by taking morphine. He was only twenty-seven years of age, and graduated from Bellevue Hospital Medical College in 1877. He practised in California for two years, and then came to this city. Although a bright student and clever practitioner, he did not succeed in his profession, as his habits were shiftless and thriftless, and he quickly lost the patients that it had taken him a long time to secure. Finally he became addicted to the opium habit, and this entirely ruined him and his prospects. It is only about two years since another young physician living near the city ended his career in a very similar manner.

DR. H. S. TANNER, of fasting fame, was arrested last week at Jamestown, N. Y., on a charge of not being properly registered in the County Clerk's Office. He had a diploma from the Eclectic Medical Institute dated February 2, 1859, indorsed by the United States Medical College, of New York, which is not a legal institution. Dr. Tanner is the third eclectic physician who has been arrested there recently on information lodged by the Secretary of the Chautauqua Board of Censors. He claims it is an effort of the regulars to suppress the eclectics and intends to make this a test case.

THE ORIGIN OF THE EGYPTIAN CHOLERA is still a matter of dispute, according to a correspondent of the *Medical Press and Circular*. The English continue stoutly to maintain that it originated *de novo* in Damietta. Some of the French have also taken that view. Dr. Grant Bey and many others, however, believe it to have been imported from Asia.

DIGITAL DIVULSION IN GASTRIC STENOSIS.—Professor Loveta has recently performed for the fourth time the operation of digital divulsion of the pylorus for stenosis. The patient was cured.

THE NATIONAL WHOLESALE DRUG ASSOCIATION met last week in this city. At one of the sessions Mr. Meyers, of Cleveland, read a report of the Committee on Proprietary Articles. He spoke of the importance of this branch of the trade, more than one-third of the entire sales in the drug market consisting of patent medicines. Mr. C. B. Allaire, of Peoria, read the report of the Committee on Adulterations, in which, and in the course of the discussion which followed, were developed many tricks of the trade, such as mixing castor-oil with oil of lemon, and corn meal and wheat flour and buckwheat flour with powdered drugs. The committee deplored the increased adulteration of wines and brandies, and urged members of the association to sell none but pure drugs. A dinner was given in the evening at Delmonico's.

HONORS TO MR. LISTER.—Professor Lister has been visiting the city of Buda-Pesth, and has been received with great honor by the profession and students there. A banquet and torch-light ovation were tendered him, accompanied with addresses of welcome, cheers, and congratulation.

WOMEN AS DRUGGISTS.—Six ladies have distinguished themselves, says the *London News*, as students in the South London College of Chemistry, where they have been studying with a view to pass the examinations of the Pharmaceutical Society. They mean to begin life as druggists, and we believe they are the first women who have been trained in a public school for the business of pharmacy. They will assuredly deserve credit for their enterprise, for if they succeed they will have done good service in widening the area of possible employment for women. It has often been matter for surprise that ladies did not select pharmacy as a fair field for the exercise of their talents in winning an honorable livelihood. The trade is a profitable one; in fact, the old saying in the country used to be that the druggist's shop was the only one in the village where every shilling taken in the till earned 11d. for the master. The work of preparing and compounding medicines is also neat and delicate—indeed, the Americans have almost elevated pharmacy to the dignity of a fine art in these later days. It is light, and cannot by any pretence be termed "unwomanly"—so that there ought to be no social prejudice against it. The only possible objection to women as pharmacists would rest on their implied inability to acquire the scientific knowledge necessary for safe practice. But that objection the six lady students who have stood so well in their classes at the South London School of Chemistry have personally disproved; besides, it is not necessary to license any woman as a druggist unless she has the requisite scientific qualifications. In these days, when people suffer as much anxiety about the employment of their girls as of their boys, the discoverer of a new occupation for women is a public benefactor.

CLINICS AT THE SCHOOL OF OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY OF THE NEW YORK EYE AND EAR INFIRMARY.—A "subscriber" writes: "Please correct what is doubtless an unintentional error in your published 'Schedule of the Various Clinics to be held in New York City the coming Season,' in regard to the clinics held at the School of Ophthalmology, Otology, and Laryngology of the New York Eye and Ear Infirmary. You announce one clinic only at that institution, where there are three or four held daily, as follows: Eye clinics at 2 P.M. on Monday, 1.30 P.M. on Tuesday, 2. P.M. on Wednesday, 1.30 P.M. on Thursday, 2 P.M. and 3 P.M. on Friday, 1.30 P.M., 2.30 P.M., and 3.30 P.M. on Saturday. Ear clinics at 3 P.M. and 4 P.M. on Monday, 3.30 P.M. on Tuesday, 4 P.M. on Wednesday, 3 P.M. and 4 P.M. on Thursday. Throat clinics: 1.30 P.M. on Tuesday and at 3 P.M. on Wednesday. By inserting the above it is hoped that many who have read the advertisement of this school in the widely-circulated pages of THE RECORD may not be misled."

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 19 NEW YORK, NOVEMBER 10, 1883 Whole No. 679

Original Articles.

MALARIA AS AN ETIOLOGICAL FACTOR IN NEW YORK CITY.

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NEW YORK.

THE day of system-building in medicine has passed away. The hammer of skepticism has dealt sturdy and effective blows to the pretentious systems which have from time to time been erected by self-constituted authorities.

The history of medicine reveals the fact that in days of yore medicine represented a vast empire, ruled by the great monarchs, whose thrones rested upon university chairs and whose dicta were promulgated by satraps and underlings with reverence, and followed by the masses with pious zeal.

To-day medicine represents a great republic, in which "the people rule." Under this regime there exists no authority whose leadership is recognized with unquestioning obedience. No learned professors weave ingenious theories to serve as unerring guides to the masses. But there is a silent and no less potent influence "leading" the minds of the profession, especially in this section of our country; fashion finds zealous votaries in our ranks and exacts unquestioning obedience among a large following.

The discussion of a potent therapeutic fashion of the day and its bearings upon physician and patient forms the theme of this paper.

Sixty years ago the renowned Hufeland[1] wrote, "It is really remarkable that, just as we have escaped from the *opiomania*, a real *hæmatomania* has risen among us. A veritable thirst for blood has overpowered some physicians, and of many it may be said, as of the ancient gods, they cannot be propitiated except by the sight of blood. The loss of blood is no longer reckoned by ounces but by pounds; every headache, every indigestion, is sufficient ground for abstraction of blood." In France an esteemed author, Audin-Rouvière[2] re-echoed Hufeland's philippics against blood-letting. "The leech fury," he says, "is carried so far that every mild headache, every slight palpitation, the slightest indisposition demands the presence of the physician, who at once orders leeches," etc. "*Chaque siècle a son goût particulier et sa mode*," says this brilliant writer. And he says truly.

To-day the taste and fashion have changed indeed, although not a century has passed over our heads. The "phlogozelotismus" of Hufeland's day has been succeeded, in our country at least, by a *malario zelotismus*, and the hæmatomania which was the baneful offspring of the former has been succeeded by a quiniomania, which happily does not equal its predecessor in pernicious effect.

To-day quinine rivals the blood-letting of a former period in its universality of application in the treatment of disease.

Among purely medicinal articles this drug exceeds all others in the quantity manufactured and imported into this country. Quinine is to-day the greatest "staple article" among medicines in the commercial world. Every large drug house presents special claims for its own preparations of the cinchona alkaloids. In the show-windows of the retail druggist quinine is heralded as a panacea, in various seductive forms. Pills, capsules, compressed powders, tablets, elixirs, syrups of quinine are regularly sold to the anxious seeker after health without a physician's prescription. A schedule of prices may be seen prominently displayed in the windows of many druggists, offering quinine pills as the grocer offers eggs. The jaded pleasure-seeker, the wearied merchant, the excited speculator, the hard-worked literary man, the pallid clerk, the nerveless seamstress; men and women in all conditions of life resort to quinine when suffering any of those undefined and undefinable ailments due to their vicious modes of life. Few cases come under the observation of the physician which have not been dosed with quinine.

A credulous public seeks in this agent an unfailing remedy for a large catalogue of diseases. Malaria is supposed to be the omnipotent, ubiquitous enemy lurking in every household. In the luxurious dwellings of the rich as well as in the humble tenements of the poor, in the crowded schoolhouses, in the prisons and court-rooms, in the railway stations, in the beautiful parks of this great city, and even in its snow-clad streets, at every point "where people do congregate," malaria is believed to contaminate the air with its noxious elements, and quinine is trusted to exorcise this potent yet hidden terror! *This popular idea has originated in the reckless diagnosis of malarial fever by many physicians, and the facile resort to quinine in all diseases characterized by an elevation of temperature.*

The comparison of a notable "Compend of Medicine," written by Professor Nathaniel Chapman fifty years ago, with a similar work published a short time ago, offers an illustration of therapeutic fashion. In Dr. Chapman's book, the stereotyped recommendation under the head of treatment was, bleeding, leeches, mercury; the modern compend bears the stereotyped legend, quinine, food, stimulants. The lay as well as the professional mind is now so thoroughly imbued with the omnipotence of malaria as an etiological factor that we are rapidly approaching the adoption of the views of Macculloch, a vigorous malaria maniac, who wrote a work[1] of considerable merit, but which failed to leave an impression by reason of his extreme views. This author delineates the prevalence of the "typhus fashion," against which he delivers himself as follows (p. 26): "From an unfortunate blindness as to the existence or presence of malaria or its causes, added to the want of reflection among the mass of routine practitioners and perhaps not a little aided by the now popular and vulgar use of the term typhus, it is almost the invariable usage, not merely of the people, but of the generality of practitioners, to give this term to every continuous marsh fever; and not only so, but more inexcusably to apply it even where the most ordinary discernment and reflection would indicate a true remittent." How nearly the views "of the people and the generality of practitioners" of the present time, in this country, and especially of this city, approximate to those of Macculloch, will be evident from a few quotations from his work. On page 50 he says: "Remittent fever may be found with scarcely any marked symptoms, as muscular weakness, at times not even the appetite seems affected." On page 31 he refers to con-

[1] Journal der practischen Heilkunde, p. 5. Berlin, 1824.
[2] Audin-Rouvière: Plus de Sangsues! Paris, 1827.

[1] Essay on Remittent and Intermittent Diseases. London, 1828.

stipation (!) as follows: "In the whole catalogue of ordinary practical errors I know few indeed more common than that which views a sluggish state of the bowels as a primary disease, sometimes also as a consequence of theoretic disorders of the liver, instead of considering it what it really often is, the produce of a febrile state, belonging either to the fever or some other initiative and similar cause" (malaria). He dwells with equal emphasis on malaria as the chief cause of a formidable catalogue of maladies, among which he enumerates delirium (p. 61), hectic (p. 41), debility, rheumatism (p. 370), diarrhœa (p. 390), hay fever, catarrh (p. 344), palpitation of the heart (p. 359), palsy of the heart (p. 359), hysteria (p. 85), climacteric diseases (p. 304), lethargy and drowsiness (p. 76), mental diseases (p. 331), suicidal mania, etc. "Were I to pursue the illustrations of every disease which occurs as a symptom in the anomalous and obscure fever arising from malaria, I should write a universal treatise on physics," he says on page 87. Does not the tendency of "the people and generality of practitioners" seem to be in the direction of these views to-day? Are not many of the disorders which Macculloch classes as malarial to-day ascribed to malaria by the people and, unhappily, also by some members of the profession? Lest the picture should appear overdrawn, I will mention that only a few weeks ago a case of suicide, reported in the newspapers, was gravely charged to malaria as the cause! Still more recently a prominent physician of this city was treated for malaria, when it was discovered that he was really suffering from the initiatory symptoms of general paresis.

Witness, also, the five to six hundred *deaths* annually ascribed to malarial fever in New York, a city far remote from the tropics.

Witness, also, the immense consumption of quinine and its preparations, as an antidote to the malarial poison. The typhus mitior, synocha and synochus of Cullen, were the fashion of Macculloch's day. He endeavored to convert the "blind followers" of Cullen to his more fanatical universal malaria doctrine, but he failed at that time. Are the seeds sown by Macculloch germinating to-day?

It would be a quixotic enterprise to attempt to win the profession over from the dominant malarial idea of many cases of fever to any other *universal* etiological view. Far be it from me. It is my aim to "hold the mirror up" to my confrères, to sound a note of warning, and chiefly to *urge most earnestly a more careful diagnosis of febrile disorders, especially as they prevail in populous districts and cities.* It would be profitable to subdue somewhat that spirit of self-satisfaction and overweening confidence with which the vast improvements in physical diagnosis, aided by chemical and mechanical discoveries, have imbued the modern professional mind. *The symptomatology of disease requires a more attentive study.* The example of the old masters in medicine may be profitably emulated to-day. When we read the correct delineations of many diseases to be found in the writings of Hippocrates, Galen, Aëtius (who was so freely followed by Shoenlein and his scholars, Eisenmann, Buzonini, Canstadt, and others of a later day), and of Prosper Alpinus (who is justly called the father of semeiology), of Boerhaave, Van Swieten, Sydenham, Fr. Hoffman, and Gaubius, we trace the master hand in every touch of the picture drawn from nature. Relying upon their own personal observations, they scanned with scrutinizing eye the history, critical periods, the temperature, pulse, respiration, tongue, facies, and secretions. Following their example and aided by the modern methods of precision, how vast would be the vantage-ground of the physician of the present time in facility of attaining a correct diagnosis and consequently a more successful therapeusis! The fevers of our country have been carefully and conscientiously studied by Drake, Bartlett, Mitchell, Wood, and others. These authors have furnished us a complete semeiology of malarial fevers, which it will be profitable to study at the present time. The dissemination of the idea that malaria is a predominaut element in the etiology of a large number of diseases in our cities (and the abuse of quinine as a remedy as a result thereof) is due to two causes, viz.: errors of diagnosis, resulting from an imperfect appreciation of the manifestations of true malarial fevers, and, secondly, the erroneous recognition of typho-malarial fever as a true malarial disease. It is the object of this paper to contribute to a more correct appreciation of malarial fevers by pointing out the errors of diagnosis, as illustrated in the "Records of the Board of Health" of New York City, and in a subsequent portion to devote attention to the differential diagnosis of true malarial fever from diseases simulating them.

The conclusions of this essay are based upon observations made during a public and private practice of twenty-one years. The first three years of this period were passed in active service as a military surgeon in the camps of Virginia; the succeeding fifteen years were spent in an extensive practice at Camden, S. C., and upon the plantations on the banks of the Wateree River, where I had medical charge of many hundreds of laborers and planters; the latter portion of this period has been spent in this city, residing during the summer months at Carmansville, and pursuing the practice of medicine in those so-called malarious suburbs, Washington Heights and Fort Washington, where I had under my medical charge three institutions; which contain about fifteen hundred children, teachers, and other employés. These conclusions have been confirmed by oral communications from experienced practitioners in this city, and are sustained, as will be shown, by ample statistical data.

From the days of Lancisi, malaria has been recognized as a peculiar influence existing in paludal localities, and emanating from the combined action of heat, moisture, and vegetable matter. This view, somewhat modified but not essentially altered, is to-day held by a large majority of medical men in all countries, but especially in tropical and semi-tropical regions, where malarial diseases are more frequently observed. Recently, however, a number of able gentlemen in the New England States and elsewhere in this country, claim to have discovered facts, which lead them to controvert the established opinion. A late convert[1] to the anti-Lancisian doctrine of the etiology of malarial fevers, writes: "Lancisi's investigations were extensive and searching and his conclusions seemed so irresistible that they were adopted by scientific men at once, and have since maintained, until within a very brief period, an assured place as truths in professional literature. Those who subsequently published medical works, which needed to include diseases of a miasmatic character, accepted without question or further investigation the opinions inherited, so to speak, from the learned author. Thus they passed from hand to hand, and finally reached our period, bearing such emblems of authority as to challenge and disarm criticism."

The history and literature of medicine do not sustain this author in the opinion that the men, great and small, who have written and lectured upon malarial diseases during the past one hundred and seventy-five years have "accepted without question or further investigation the opinion, so to speak, inherited from the learned Roman author."

The fact that two-thirds of the mortality of many thickly populated portions of the globe is due to malarial diseases has stimulated investigation to the utmost. The array of writings on this subject contained in the library of the Surgeon-General's office, U. S. Army, bears abundant testimony to the constant agitation of this subject during the past one hundred and seventy-five years. The last volume of the "Index Catalogue" devotes one hundred and forty closely printed columns to the enumeration of the titles of works on malarial diseases, the great majority of which have been published since Lancisi's

[1] New York Medical Record, August 18, 1883.

day. The Lancisian theory has, in fact, often been subjected to criticism. Dr. Wm. Fergusson in his paper "On the Nature and History of Marsh Poison" in the *Edinburgh Philosophical Transactions* endeavors to show that vegetation is not necessary to the development of malaria. Sir Gilbert Blanc offers similar arguments in his description of the Walcheren fever.

Deputy-Surgeon-General Munro[1] takes strong ground against the Lancisian doctrine, arguing in favor of "certain electrical conditions." Dr. Oldham's "chill theory" of the causation of malaria has also attracted much attention. The views of these writers were ably controverted by two papers,[2] by Dr. Maclean of Netley—which gave rise to an animated discussion in the *British Medical Journal.* These references will suffice to demonstrate that the Lancisian theory has not only *not remained unquestioned* but has been vigorously assailed. It would indeed be remarkable, were this not so. The theory and practice of medicine have passed through great changes during the past one hundred and fifty years; disease has been studied with more accuracy; new disorders have been recognized which were formerly regarded as symptoms only, and a complete revolution has taken place in therapeutics. But amid all this upheaval the Lancisian theory of the etiology of malarial fever stands unshaken, and is accepted by the larger majority of the profession in every part of the inhabited globe. To-day this theory is again assailed. Not in the malaria-ridden regions, not in India, Africa, South America, and the Southern United States, where malarial diseases have scourged the people from time immemorial, where their irrepressible malignancy has aroused the strongest efforts of government and people, but in the New England States, where their prevalence appears to be of recent date, is the iconoclastic hammer heard. Far be it from me to impugn the candor and ability of the authorities who have investigated these diseases in New England. I have been deeply interested in their writings and especially in following the recent trials of the Mill-dam question, in which the polemic talent of several gentlemen, supported by their scientific attainments, shone with brilliancy. As this question is the subject of the Fiske Fund (?) Prize Essay for 1884, I refrain from entering here upon its discussion and await anxiously the developments of the future.

In the meantime I would affirm that my own observations, made during the past quarter century, in the vicinity of Southern rivers, whose banks are frequently overflowed, and amid the swamps along their course, sustain me in the following points.

First.—A combination of solar heat (above 60° F.), moisture (below the saturating point), and vegetable matter (not living) is necessary for the production of *true malarial fevers.*

Second.—Any influence which withdraws one of these elements, renders the remaining incapable of generating true malaria. A "black frost," which term implies a temperature which completely destroys all vegetation not perennial, followed by a continuous temperature below 60° F. invariably checks malarial emanations. Fevers which have scourged plantations during the entire summer cease to furnish new victims after such a frost, and the planter often congratulates himself upon an accession to his working forces, while he deplores the loss of his "top crop" of cotton. I will cite only one illustration from my observation. The Wateree River, in South Carolina, is subject to frequent overflows, by which the alluvial lands on its borders are inundated. After the summer or August freshet numerous cases of malarial fevers invariably spring up among the laborers residing near the banks of the river; after the winter or February freshet, on the contrary, no new cases are observed, unless the temperature reaches 60° F. and remains above this point for a considerable period. Again, perfect drainage, by withdrawing the element of moisture entirely, inhibits malarial emanations. This has been so often demonstrated that it has become an axiom in agricultural and sanitary engineering. Thoroughness is a *sine qua non* in this as in every other sanitary procedure. Partial drainage will, as Dr. Russell justly observes (MEDICAL RECORD, August 18, 1883, p. 179), be succeeded by a positive increase rather than by a subsidence of miasmatic troubles. The reason is obvious.

Third.—It has been long regarded as an established fact that malarial disorders prevail chiefly in rural or suburban localities. Hence the term swamp fever, paludal fever, country fever (used in the South). Experience has taught that the crowded cities of the temperate zone offer an uncongenial soil for their development, the diseases disappearing under the improved drainage and with increase of buildings upon sites which formerly furnished all the elements for the development of malaria.

Fourth.—Malarial fevers are very amenable to treatment in temperate climates. Ordinary remittent fevers have been very rarely fatal, in my experience; ordinary intermittent, of all types, have never proved fatal, within my recollection.

Impressed with these views by personal observation, by intercourse with physicians laboring in the same field, and by careful study of the literature pertaining to malarial diseases (these forming fifty per cent. of my aggregate of cases), I received with some surprise and not a little scepticism the information that malarial diseases prevail extensively in New York City, and that a large mortality is ascribed to them.

I have investigated this subject during the past three years, and now offer the result of my studies, not in the spirit of criticism, but prompted by a desire to direct attention to certain errors, which I hope to render clear to the unprejudiced reader.

I.—New York does not furnish the combination of elements necessary for the production of *true* malarial fevers, except to a limited extent, and in certain circumscribed localities.

In the summer of 1880 I asked the advice of medical and lay friends with reference to removing my family to that beautiful suburb, Washington Heights, for the summer. I was informed that this section of the city would prove an insalubrious summer resort; that, in fact, it is one of the most malaria-ridden parts of the island, on account of its proximity to the Harlem and Hudson Rivers.

Being attracted by the location of the "Heights," and feeling somewhat reassured by the fact that my family had become thoroughly inured to a malarial climate, I ventured to disregard the advice of friends, and took up my residence at Carmansville on June 18, 1880. I spent the entire summer in this beautiful suburban village, and became so impressed by its salubrity that I decided to again adopt it as a summer home. Having passed three summers at this place, I am convinced that it enjoys as much immunity from malarial diseases as any portion of the world not specially favored by altitude or remoteness from water-courses. The malarial cases which came under my observation were due to local causes acting in circumscribed localities, and removable by the most simple sanitary measures. Until the past summer I had not kept a record of malarial cases, but the idea impressed itself on my mind that genuine malarial fever was not often seen outside of the circumscribed localities to be presently mentioned. The fact is, that this portion of the island which stands in bad repute as a malarial section represents a rocky bluff, averaging one hundred and fifty-nine feet above the Hudson and Harlem Rivers.[1] On the eastern side it rises abruptly from the Harlem flats (which, by the way, furnish a perfect specimen of malaria-producing soil). But the bluff

[1] Remarks on Malarious Fevers and Cholera, Army Medical Department Report, 1872. London, 1874.

[2] British Medical Journal, 1874, vol. ii., 766 and 806.

[1] Measurements obtained from Matthew Cox, C.E.

is protected against malarial invasion from this side by a magnificent growth of trees, whose deep verdure not only graces the rocky promontory, but whose abundant foliage offers an effective barrier to effluvia arising from the flats. Four cases occurred during the past summer, in a house which stands on the extreme eastern point of One Hundred and Fiftieth Street, immediately overlooking the flats. An open vista to the latter is formed by the more sparse growth of foliage at this point. Another case occurred near the Aqueduct at One Hundred and Fifty-eighth Street, where a depression exists, which receives the garbage and filth from many wagons. A sixth case was seen on the brow of the slope at One Hundred and Ninetieth Street. These six cases are the only true malarial (intermittent quotidian) fever which I saw on the whole eastern border of the bluff from One Hundred and Forty-fifth Street to the upper point of the island. The remaining cases which I have noted during the past summer were observed in the following localities: Four on One Hundred and Fiftieth Street, and two on One Hundred and Fifty-first Street, between St. Nicholas and Tenth Avenues. These streets are partially occupied by buildings, all of which are wooden tenements. There is neither drain nor sewer, and filth accumulates in heaps until it reeks in the noonday sun. Here is every element for the production of malarial fever, which prevails every summer, and which may be effectually banished by draining and scavengering. One case was treated on One Hundred and Sixty-first Street, another on One Hundred and Sixty-second Street, between Tenth and Eleventh Avenues, near a point through which a blind sewer passes, but not a single, even superficial drain. Another case was seen on One Hundred and Sixty-third Street, near the Kingsbridge Road, in the midst of a market garden, which was cultivated near a basin where water could not readily drain away. At this point I observed two years ago the only cases of true remittent fever which I have seen since my departure from the South. One, a child, accompanied by convulsions in the cold stage, recovered; the other, a young girl, who was seen only a few hours before death, had been treated for malarial fever by a colleague. The last case of the season was observed on One Hundred and Forty-third Street, in a building standing on the edge of a stagnant pond, near Eighth Avenue. I may also mention two cases at the Colored Orphan Asylum.

All these cases occurred among the poorer classes, who occupy wooden tenements located in undrained localities. One case which was seen in a family residing in Audubon Park, near the bank of the Hudson, had contracted malarial fever during the previous summer at Hastings and had recently returned from a visit to Staten Island.

In the public institutions, which contained last summer over fifteen hundred inmates, I observed only two cases of true malarial fever, despite the fact that two of these, sheltering one thousand children and officers, are located in close proximity to points where some of the cases of malarial fever occurred. The small number of cases and the entire absence of fatality among so large a clientèle, afford unimpeachable testimony that malarial fevers are not endemic in this suburb, and that the prejudice existing in the minds of the people and the profession is unfounded. As an illustration of this prejudice I may cite the fact that an eminent surgeon of this city declined an invitation to send his child to Fort Washington (near the railway station) for recuperation, because he feared malaria. I have not seen one case of malaria within a considerable distance of this point during the past three summers. Several years ago another noted physician advised a family to remove to Washington Heights in order to restore to one of its members the health which had been shattered by malaria. Last spring a relative of this family sought an opinion from the same gentleman with reference to the salubrity of Washington Heights and received an earnest injunction to leave it severely alone, "*because it is full of malaria.*" The truth is that no portion of this city or its suburbs offers such beautiful and healthful localities for residences, as does this garden spot of New York City. Elevated one hundred and fifty-nine feet above tide water, its rocky soil presents the most perfect foundation for buildings, and opportunity for draining with ample "fall." Its wide streets, St. Nicholas Avenue, Tenth Avenue, and Boulevard, Kingsbridge Road, 145th, 155th, and 175th Streets, will ere long be thronged by residences of people whose good sense will teach them the advantage of pure air within easy access of the busy marts of the metropolis. The sanitary authorities appear to be preparing for this event, by the construction of large sewers and drains, and by the filling up of the flats from 145th to 155th Street.

During the spring, fall, and winter months I have observed malarial cases only in a few localities, and chiefly in persons who traced the malarial infection to a period long antecedent to the attack.

That true malarial fevers do occur in this city cannot be denied. There are many localities which furnish all the elements for malarial emanations, as unoccupied lots, receiving surface drainage, and points where excavations are made for buildings or sewers. Here, however, the disease is found circumscribed by and traceable to the local causes.

It follows, from my *personal observation*, therefore, that there is no ground for the popular idea that New York City is a vast laboratory for the production of malaria.

II. The temperature of New York City in midwinter is not favorable for the development of true malarial fevers, especially of a serious type. If there is one point that has been recognized by practitioners in the Southern United States and in tropical countries, it is the fact that frosts and low temperature destroy "malaria," and check at once epidemics of diseases due to the latter. Referring to malaria, Bishop Heber in his "Narrative of a Journey through the Upper Provinces of India," relates that not monkeys only, but everything which has the breath of life instinctively deserts them (the woods) from the beginning of April to October.[1] "It is in the extreme heat, and immediately after the rains have ceased, in May, the latter end of August, and the early part of September, that it is most deadly. In October the animals return." "From the middle of November to March troops pass and repass, and with common precaution no risk is usually apprehended." "The period of the year during which malaria is most active is summer and fall, from June to November—for at this period only has the sun sufficient power" (Bartholow).[2]

"It is furthermore well known that the development of the disease usually takes place during the summer months, and that it disappears, or *at least no new cases arise during the winter unless the latter is mild.* We know, too, that the form, type, and intensity of the fever are usually in pretty direct relation to the temperature of the atmosphere. This is not only established by the testimony of writers from warm climates, etc." (Hertz).[3]

"In the more temperate and colder climates the winters are usually free from the disease" (Hertz).[4]

It would indeed be an act of supererogation to cite additional authorities in affirmation of the proposition that malarial diseases of serious types do not prevail in any city of the temperate zone during the winter. And yet the reports of the Board of Health of New York City (for which I am indebted to Dr. W. DeF. Day and to manuscript from Dr. John T. Nagle) furnish the following statistics which I have compiled from the records:

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[1] Watson's Practice.
[2] Pract. Med., p. 775.
[3] Ziemssen's Cyclopædia, vol. ii., 568.
[4] Op. cit., vol. ii., 569.

AVERAGE TEMPERATURES AND DEATHS FROM MALARIAL FEVERS IN NEW YORK CITY FOR 1877, 1878, 1879, 1880, 1881, AND 1882.

PERIOD.	Average Temperature.	Number of Deaths.
January to April	33.98°	586
April to July	60.06°	684
July to October	72.37°	954
October to January	46.14°	812

With an average temperature barely above the freezing point we are expected to believe that New York furnishes 586 deaths in three years, or nearly one hundred deaths from malarial fevers in three months. This is a startling record, the comparison of which with the statistics of any other city of the temperate zone will demonstrate that a serious error is hidden within it.

In Dr. Chaille's[1] able statistical papers it is shown that the total mortality from malarial fevers in New Orleans from 1856 to 1860 was 1,315, and of this number 1,047 were reported from May to October (inclusive), and 268 from November to April (inclusive), affording evidence of the fact that even in semi-tropical New Orleans the winter mortality from malarial fever is as one to about four of summer mortality, *while in New York City the summer and winter mortality from the same diseases are nearly equal.*

III. The recorded fatality of malarial fevers in New York City adds another proof that the diagnosis of these diseases is inexact. Deaths from malarial fevers in New York from 1876 to 1878 were as follows:

Remittent fever	1,083
Intermittent fever	984
Typho-malarial fever	709
Congestive malignant intermittent fever,	79
Congestive chill	4

This table demonstrates that *the preponderance of mortality is not in cases of congestive and malignant fevers, but in the remittent and intermittent types.*

Is this large mortality in accordance with the accepted view of the prognosis of remittent and intermittent fevers?

"In the uncomplicated form of intermittent fever, without malignant tendency, the prognosis is almost always favorable. I have never seen such a case terminate fatally" (Wood).[2]

"The prognosis [of remittent fever] is generally favorable. The milder forms of the disease almost always end in recovery, unless mismanaged, and the severest often yield to prompt and suitable treatment, etc." (Wood).[3]

"In cold countries, such as ours, it [prognosis of intermittent fever] is almost always favorable. To persons of tolerable health and strength we may confidently promise a cure. Even the more strongly marked inflammatory form of the fever seldom terminates fatally" (Watson).

"The direct mortality from ague [syn. of intermittent fever], at all events among the European races, is small. Remittent fever is usually seen in its gravest forms in hot climates" (McLean).[4]

"Ordinary simple intermittent fever, as regards immediate danger, is not a grave affection. Whenever the disease involves immediate danger, it is to be considered pernicious and not, therefore, belonging to the head of ordinary or simple intermittent fever" (Flint).[5] "Simple remittent fever in itself does not involve danger to life; as a rule, it is apt to be more severe in tropical than in temperate climates" (Flint).[6] "The prognosis in simple intermittent fever is good" (Loomis).[7] Death should rarely occur. Even cases of the severest types of this fever should terminate in recovery—the type of the fever varies very much according to locality. The *remittent fever which we see in this city is of a mild type*" (Loomis[7]), italics mine.

But why quote authorities on this subject? Every tyro in medicine knows that the prognosis of intermittent and remittent fevers of temperate climates is favorable, since the recognition of the specific anti-malarial properties of quinine. In the South a practitioner who would lose even a small proportion of his cases of intermittent and remittent fever would be forced to seek other fields, so seriously would his reputation suffer. Even the algid and pernicious fevers are no longer fatal if seen in the early stage, when the patient's system may be saturated with quinine.

If further proof is required to demonstrate that many physicians in this city diagnose malarial fever with extreme recklessness, it is furnished by the Report[8] of Dr. Charles P. Russell, Sanitary Inspector of the Board of Health. He says: "Two hundred and thirty-one deaths from malarial diseases were recorded within the year [1876]. All such cases were assigned to sanitary inspectors for investigation, with the main object of ascertaining definitely, if possible, the locations where said diseases had originated. In order to arrive at a satisfactory conclusion in any instance, the inspector was obliged to see personally, or communicate with the attending physicians, and frequently, also, to make an inspection of the place where the death had occurred. Many physicians refused or neglected to afford any information on the subject. *Quite a number of cases were excluded on account of uncertainty as to the actual cause of death, or as to its complication with a malarial element* [italics mine]. Ninety-six cases, however, were fully investigated."

Out of 238 cases, 142 were excluded on account of "uncertainty," or refusal and neglect of physicians to aid in establishing the correctness of their diagnosis! and out of the 96 cases fully investigated 10 are recorded as "malarial disease," a very obscure diagnostic designation of a fatal malady.

It follows, therefore, that only about one-third of the mortality ascribed to malarial fevers in New York city in 1876, may be indisputably attributed to the true forms of these fevers.

This result of a careful investigation by a gentleman who is an expert in sanitary inspection lends unimpeachable confirmation to the evidence above adduced, to establish the fact that the errors which are constantly committed in the diagnosis of malarial fevers have conferred upon New York a reputation as a malarial city which is as unenviable us it is unmerited.

158 WEST FIFTY-FOURTH STREET.

[1] N. O. Medical and Surgical Journal, 1870, xxiii.
[2] Pract. Med., vol. i., 285.
[3] Op. cit., 315.
[4] Quain's Dict. Med., 734.
[5] Pract. Med., 1001.
[6] Op. cit., 1015.
[7] Lect. on Fevers, 126.

A LITHOPÆDION.—At a recent sitting of the Académie des Sciences, Dr. Sappey exhibited a fœtus which had died at the end of six months' extra-uterine gestation, and had afterward been retained in the mother's abdomen for fifty-six years. The mother became pregnant at the age of twenty-eight, but labor did not come on at term nor afterward. At the age of eighty-four she went into the infirmary at Quimperlé, where she died three weeks after admission. At the necropsy a large hard cyst, with calcified walls, was discovered adjoining the uterus. This was divided by a saw, and found to contain a fœtus in a state of almost perfect preservation. The skin, lungs, muscles, and other parts had preserved their normal softness and appearance. M. Sappey explains the preservation of the fœtus by means of Pasteur's theory concerning the exclusion of air and aërial germs. It is a noteworthy fact, that these cases of lithopædions have been in the most authenticated instances of extra-uterine origin.

[1] Op. cit., 143. [2] New York MEDICAL RECORD, February 10, 1877.

LICHEN RUBER OF HEBRA AND LICHEN PLANUS OF WILSON.

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(Continued from p. 429.)

Lichen planus.—This form of eruption was first described by Erasmus Wilson, and consists of papules remarkable for their color, shape, tendency to arrangement in groups, situation, local and chronic character, and the pigmentation they leave when they subside.

Color.—The color of the papule is a dull red, more or less vivid and suffused with a lilac tinge, which is most characteristic in recently formed and discrete papules; while in aggregated papules and in those of long standing it is of a duskier hue. A slight hyperæmic areola is present at the base of recent papules.

Shape.—When very small the papules are roundish in shape, but when fully developed they are generally angular in outline and rise abruptly from the normal skin. They range in size from one to three or four lines in diameter, are but slightly elevated above the general level of the skin, and have a flat, smooth, shining surface, which is frequently depressed in the centre—umbilicated. The papules are covered on their surface by a thin layer of horny, transparent cuticle, which is not a scale, and neither separates or exfoliates (Wilson). When the papule subsides this layer disappears without exfoliation. If the eruption is diffuse and aggregated there is some desquamation and scaling, especially if the part has been irritated, and appearances somewhat resembling a small diffuse patch of lichen ruber or of chronic, dry, scaly eczema or psoriasis. Upon the removal of the thick adherent scales in these cases the skin beneath may present an excoriated surface.

Arrangement of the papules.—The papules are either discrete or aggregated, but generally show a tendency to form larger or smaller groups. Occasionally they are arranged as broader or narrower, longer or shorter bands. In the discrete form of eruption the papules arise successively, and after a time variously sized patches are formed, consisting of aggregated and discrete papules united by an inflamed and infiltrated base. The inflammation and infiltration cause a blending of the papules and interpapular skin, and the formation of a raised, thickened, scaling patch. The eruption spreads peripherically by the formation of new papules at the same time that the older papules disappear, leaving behind a dark pigmentation. A single papule may spread by peripherical growth until it has reached, say, the size of a split pea; but a large patch is never formed by peripheral growth of a single papule, as occurs, for instance, in psoriasis. Sometimes a patch is large enough to show a raised border and depressed centre, or a ring is formed by the formation of a chain of papules at the periphery of a patch. If neighboring rings coalesce the eruption at that place will assume a gyrate form. A patch may consist of a depressed and pigmented centre; external to this large, well-developed papules, and a periphery formed of small developing papules.

Situation.—The eruption is generally symmetrical, and appears especially upon the anterior surface of the forearms, just above the wrists; it may, however, appear upon any other part of the body, and especially upon the lower part of the abdomen, the calves of the legs, and around the knee. It has been observed upon the palms of the hands and soles of the feet, upon the penis and on the mucous membrane of the mouth and fauces.

Course.—The course of the eruption is very chronic, and the individual papules may remain unchanged for many months before undergoing a retrograde process. When they disappear they leave behind deep pigmentation and occasionally a slight atrophy. When removed by treatment, it has been observed that old papules leave behind more pigmentation than recent ones. The eruption never appears in the form of vesicles or pustules. The hairs and nails remain unaffected in this disease. There is generally very little itching attending the eruption, but sometimes it is intense. The general nutrition of the body is never affected; no matter how long the eruption lasts, it does not produce any of the grave conditions observed in lichen ruber, owing probably to its not becoming general over the whole body.

Histology.—The changes occurring in the skin in lichen planus have been studied by Neumann, Tolcott Fox, and Crocker.

According to Neumann (*Ibid.*, p. 310), the principal changes occur in the upper layers of the skin, the hair-follicles and sebaceous glands not being affected. He found the corneous and rete layers hypertrophied, the nucleus of the rete cells granular and swollen; the papillæ broader, conical in shape, and containing much granulation tissue; the papillary blood-vessels dilated, and their walls infiltrated with cells; the cell infiltration extending also in the form of bands around the blood-vessels and sweat-glands in the cutis. The unstriped muscles were hypertrophied. The orifices of the sweat-ducts were dilated from an increase in the number of epithelial cells; the sweat-duct was also dilated from the same cause, and on the gland itself numerous colloid degenerated cells were present. From these observations, Neumann concludes that lichen planus is a circumscribed inflammation of the upper part of the cutis and sweat apparatus, the latter being the primary seat of the disease. In judging of these conclusions of Neumann, it must be remembered that his description of lichen planus does not correspond in some respects with that which I have given, and which corresponds to the description of English and American writers. Neumann describes an increase in size of the papules to about an inch in diameter by growth of the periphery as a normal occurrence—a statement at variance with all other observers. This fact leaves us in doubt as to the value of his observations in lichen planus.

Talcott Fox (*British Medical Journal*, 1880, p. 398) thinks it should not be classed among the inflammatory affections of the skin, as he considers no true inflammatory action is present. According to him, the papules owe their origin to persistent neuro-paralytic hyperæmia and its results—namely, dilatation of the blood-vessels and engorgement of the tissues with blood, emigration of leucocytes, œdema, hypertrophy of the various structures, and slight desquamation. This view of the cause of the papule formation will be referred to after the structure of the papule is described.

Crocker (*Lancet*, 1881, p. 284), judging from his description of the eruption on the patients from whom he removed portions of skin, undoubtedly examined sections of lichen planus papules only, and not any of lichen ruber. As, however, he regards the two forms of papules as belonging to the same disease, he concluded that as his observations differed from those of Neumann and Biesiadecki on lichen ruber, the views of these observers were wrong, or else they had examined only papules of long standing. In quoting Crocker's views, therefore, it is to be remembered that he believes his description applies to both lichen ruber and lichen planus, although he had only examined sections of papules of lichen planus.

My own observations will be found to agree very closely with those of Dr. Crocker. In the more acute cases he finds the papule formed almost entirely by a cell effusion from one of the vessels of the superficial plexus pushing up the superimposed epidermis. This cell effusion is sharply limited at the sides, and involves several papillæ. The papillæ are flattened out, the rete is slightly hypertrophied, and there is some loosening of the upper layers of the horny cells over the centre of the papule.

In the more chronic forms, the papule is mostly formed from proliferation of the rete mucosum, the lower layers of the rete cells being flattened, and the upper layers, in-

cluding the stratum lucidum and granular layer, very distinct. The horny layers are only thickened over the centre of the papules. There is no change in the hair-follicles, unless it be that the orifices are funnel-shaped and packed with cells.

From the foregoing observations his conclusions are :

First.—The process at the commencement is entirely superficial.

Second.—That it consists of an inflammatory effusion from the superficial plexus of vessels, the cells from the horizontal vessels coming only from the upper surface.

Third.—That all the vessels of the plexus are notably dilated, and the papillæ are enlarged by downward growth of the interpapillary processes.

Fourth.—That all the epithelial layers undergo proliferation, the rete taking most part in the formation of the papule.

Fifth.—Involvement of the hair-follicles is not essential to the main process.

Sixth.—The sweat-ducts often have an influence in determining the situation of the papule and in producing the umbilication, as they were frequently present in the centre of the papules.

Through the kindness of Dr. Bronson and Dr. Morrow, of this city, I have been enabled to obtain both recent and old papules of lichen planus for microscopical examination. The papules were first hardened in Miller's liquid and afterward in alcohol, and sections examined both before and after staining with different agents. Microscopical examination of sections of a recent papule showed the following condition.

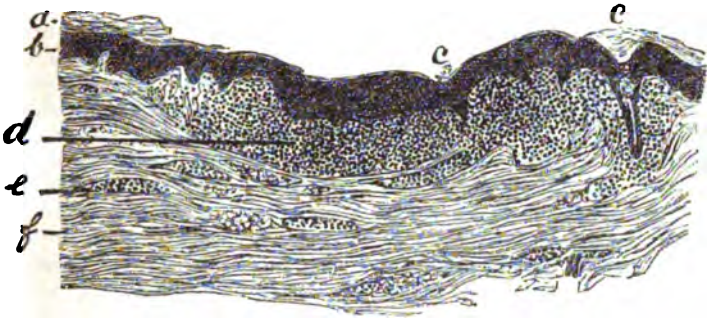

FIG. 3.—Complete Section of a Recent Papule of Lichen Planus under a Low Magnifying Power. The section includes normal skin at both sides, but most at left side : *a*, corneous layer ; *b*, rete mucosum ; *c*, orifice of sweat-duct ; *d*, round cell infiltration ; *e*, blood-vessel : *f*, corium.

In Fig. 3 is represented a vertical section of a recent papule of lichen planus, together with normal skin at both sides. The papule corresponds to the region occupied by the dense round cell collection in the papillary region and upper part of the corium (*d*). The corneous layer in the region of the papule is almost entirely absent, consisting only of one or two layers of dried flat horny cells. The absence of the corneous layer in this situation was observed in all the sections of both recent and old papules examined, and consequently was not an artificial condition from cutting or manipulation of the sections. Outside the papule region the corneous layer is of normal appearance and thickness, as seen in Fig. 3, *a*. The rete mucosum is thickened in some places, especially in the central portion of the papule area. Papillæ are not recognizable in the central part of the papule. The papillæ and upper part of the corium are occupied by a sharply limited dense collection of round cells (*d*). At the periphery of this collection the blood-vessels are dilated and crowded with corpuscles, while a considerable number of emigrated white blood-corpuscles are present directly around the vessels. The deeper portion of the corium appears normal, except that some of the blood-vessels are dilated and surrounded by a few emigrated corpuscles. Examining such a section with higher powers, the rete is found to be hypertrophied in the central portion of the papule, and especially in the region of the sweat-ducts. The cells of all the layers over the dense round cell collection in the corium are flattened in a horizontal direction, the amount depending upon the amount of pressure from below, as shown by the almost normal condition of the cells toward the periphery of the papule. The granular layer is much thicker than usual, consisting sometimes of five or more layers of cells where the rete is thickest. This hypertrophy of the rete is very variable

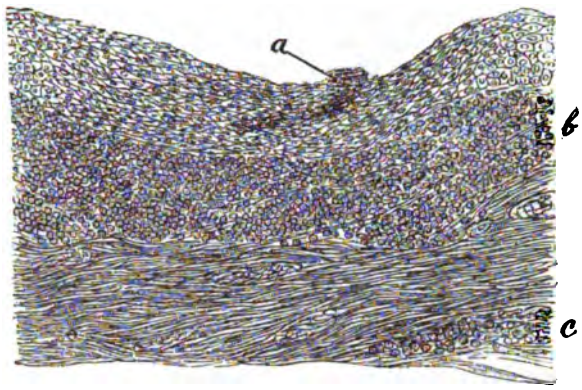

FIG. 4.—Vertical Section of the Central Portion of a Recent Papule of Lichen Planus. *a*, orifice of sweat-duct ; *b*, round cell collection ; *c*, region of a blood-vessel.

as to situation and extent. Generally it is greatest in the centre of the papule and in the region of the sweat-duct orifices, but may occur in the latter situation only. In many places within the area of the papule there is no appreciable hypertrophy, and in the earliest stage of the eruption it is entirely absent.

The cutis papillæ in the central portions of the papule are so infiltrated with cells and the rete so flattened that in some cases the line of separation between the rete and cutis is not recognizable, as is the case in Figs. 3 and 4. If the cell collection is not very dense the papilla will be observed to contain dilated blood-vessels. At the outer portions of the papule the papillæ contain a more or less dense collection of round cells and dilated blood-vessels. The cell infiltration into the papillæ and upper part of the corium consists of embryonic corpuscles (white blood-corpuscles), which take the place of the connective tissue to a greater or less extent. At the outer portions of the papule connective-tissue bundles are still present, but in the central part; when the collection is very dense, all trace of connective tissue is lost. In the deeper parts of the corium there is nothing abnormal except the presence of a few dilated blood-vessels, some of which are surrounded by emigrated corpuscles.

The hair-follicles and sweat-glands are normal, except that around the sweat-ducts the cell infiltration generally extends deeper than in other parts. In all of the papules examined a sweat-duct was found near its centre, and seemed to be the principal cause of the umbilicated appearance of the papules, as its presence prevented the pushing upward of the epidermis by the round-cell collection. This umbilicated appearance was also partly owing to the absence of so much of the corneous layer from the central portion of the papule. The hair-follicles had no influence in determining the situation of the papules.

From the foregoing observations the papules of lichen planus examined by me owed their origin to an inflammatory process occurring in the papillæ and upper part of the corium, as shown by the round-cell infiltration and the changes in the tissues of the part. The cell infiltration from the horizontal plexus did not come from the upper surface of the vessels alone ; in fact, I know of no condition, nor can I imagine one, in which only one-half a capillary wall will undergo such nutritive changes as to permit of emigration of white blood corpuscles through it while the other half remains normal. The changes observed in the rete and corneous layer are

variable in amount and extent, and can be safely regarded as secondary conditions depending upon the changed nutrition condition in the cutis. If the papule is of long standing there may be considerable hypertrophy of the rete and corneous layer, as shown by the observations of Dr. Crocker, and further substantiated by the scaly appearance of some patches of the eruption. The dense cell infiltration, by its pressure upon the papillary blood-vessels and interference with their circulation and nutrition, allows of the passing out of red blood-corpuscles, as occurs in the dense cell infiltration in connection with syphilitic papules. As a result of this extravasation we have the dark red color, and the pigmentation remaining after disappearance of the papules. In the return to the normal condition the changes are such as usually occur in inflammatory states, the round-cell collection disappears by fatty degeneration of the corpuscles and the epidermis regains its normal activity. I have not had the opportunity of examining skin where a papule had previously existed, but I have seen the fatty degeneration of the round cells.

According to the above description, lichen planus papules are the result of a circumscribed inflammation of the papillæ and upper part of the corium, and any changes in the epidermis are secondary to the changed nutrition, the result of this localized inflammation.

Prognosis.—The prognosis is always favorable, the disease having a tendency to spontaneous recovery after weeks or months of existence, and never leads to the low marasmic condition observed in untreated cases of lichen ruber.

Treatment.—In many of the subjects of lichen planus the general nutrition of the body is below a normal physiological standard, and tonics with appropriate diet are indicated. In other cases the eruption seems to be the only pathological condition present. Alkalies, especially the acetate or citrate of potash with tonics have been found to be of service in some cases. In one case reported by Dr. R. W. Taylor (*Archiv. of Derm.*, 1874) immediate benefit followed the administration of twenty grains of chlorate of potash dissolved in four ounces of water, given fifteen minutes after meals, and followed fifteen minutes later by twenty drops of dilute nitric acid in a wineglassful of water. Arsenic does not seem to have any special effect in this form of eruption. Locally the itching can be treated in the same manner as the same condition in lichen ruber, or in other skin diseases. Beyond preventing itching, local applications do not seem to influence the eruption.

Relationship between lichen ruber and lichen planus.—From a comparison of the symptoms, histology, prognosis, and treatment of the two forms of eruption, as given above, we find that, as regards the symptoms; in lichen ruber the papules generally commence on the trunk and tend to extend over the entire body, and in lichen planus they generally commence on the forearms and legs, and very rarely spread over a large area. In lichen ruber the papules are round, acuminated, covered with thin scales, and only show a depressed centre when situated around a hair-follicle or undergoing a retrograde process; in lichen planus the papules are of irregular outline, generally umbilicated, and never scaly at the commencement. In lichen ruber the eruption is not symmetrical, and the papules do not increase in size by growth at the periphery; in lichen planus the eruption is generally symmetrical, and many of the papules increase in size to a certain extent by spreading peripherically. Lichen ruber, if not treated, leads to marasmus and death; lichen planus has no special effect upon the general condition of the system.

Hence, as regards the symptoms, course, and prognosis of the two forms of eruption, they are widely different from each other.

Histology.—From microscopical observation we find that lichen ruber is an atypical keratosis, and lichen planus an inflammatory affection of the papillæ and upper portion of the corium, with subsequent changes in the epidermis. In lichen ruber the corneous layer is hypertrophied, the rete also slightly thickened, whilst there are few or no changes in the cutis; in lichen planus the corneous layer is often absent, the rete is thickened, and there is a dense round-cell collection in the papillæ and upper part of the corium. Lichen ruber is, therefore, an anomaly of growth of the corneous layer, and lichen planus an inflammatory affection of the vascular portion of the skin. As regards the pathological histology they are thus widely different.

As regards the treatment, we find that arsenic, which may be regarded as a specific for lichen ruber, has little or no effect on the eruption of lichen planus, and alkalies and tonics, which are frequently of much service in the latter, are of no benefit in the former.

The symptoms, course, histology, and treatment are therefore entirely different, and the question arises as to whether eruptions with such differences in these respects can still represent two forms of the same disease. The polymorphous eruptions of the skin are *par excellence* syphilis and eczema, and with reference to the former a macular syphilide bears no resemblance either in symptoms or treatment to a gummatous tumor, although both are but different forms of the same disease. A study of the natural history of syphilis teaches, however, that the macular eruption corresponds to an early stage, and the gummatous formation to a late stage of the syphilitic infection, and that both are an invariable sequelæ of the syphilitic poison; in other words, a study of these two forms of syphilis in any given case will show that both are but forms of the same disease. In eczema the eruption may be papular, vesicular, pustular, or squamous in character; but generally there is a combination of these different forms, and all can be regarded as a superficial catarrhal inflammation of the skin, the intensity of the inflammation or chronicity of the process accounting for the difference in the appearances presented. In the case of lichen ruber and lichen planus, the latter has been regarded as a mild form of the former, the difference in character being attributed to the climate and mode of living in England and America, where lichen planus is frequently met with, as compared with Germany, where lichen ruber is more frequent. It is true that these conditions as regards climate and mode of living do have an influence upon certain skin-diseases, although not to the extent generally believed. Those who have seen lupus vulgaris in Vienna and in America have observed the milder character of the disease in this country, depending probably upon the better diet of the laboring classes here as compared with that of Germany, but the difference is only one of degree; the situation, symptoms to a great extent, the pathological histology and treatment are the same, and even some of the cases observed here are as severe as any observed in other countries. In lichen ruber and lichen planus we have found that it cannot be a question of intensity of the pathological process, as the histology of the two forms of eruption is entirely different. Neither can they represent stages of the same disease, as no one has yet observed a case of lichen ruber develop into one of lichen planus, or *vice versa*. Here in New York a very considerable number of cases of lichen planus have been observed by the different members of the New York Dermatological Society, and although every member is conversant with the characters of the eruption in both lichen ruber and lichen planus, and consequently would be quick to recognize any transition from the one to the other, no case has been observed or reported in which this has occurred. The papules of lichen planus never change to those of lichen ruber, and *vice versa;* and no similarity has been shown to exist between the two forms of eruption, except that of slight resemblance in color and the papular form of the eruption. From a consideration of all the above observations, we feel justified in con

cluding that lichen ruber and lichen planus are two entirely distinct diseases of the skin, and that the grounds for regarding them as but two forms of the same disease are altogether untenable.

356 West Forty-second Street.

OXYGEN AND SOME OF ITS COMPOUNDS AS THERAPEUTIC AGENTS.[1]

By SAMUEL S. WALLIAN, A.M., M.D.,

BLOOMINGDALE, N. Y.

(Continued from p. 457.)

It is an every-day fact in chemistry that substances identical in ultimate composition, as far as our yet imperfect art can discover, are strikingly different in a physiologic or therapeutic sense. Whether this difference consists in varying modes of atomic and molecular arrangement, or in different, but as yet indistinguishable, states of the oxygen base, is yet beyond our scientific ken.

Hence it does not follow that oxygen as found in common air, and the same element in doubtless a nascent and hyper-active state, as artificially generated—liberated would be a more accurate term—are either physiologically or therapeutically identical.

Again, the *physiological* relations of oxygen are definite and limited, while *its nature and potency as a therapeutic agent is, as yet, not generally understood, is entirely unlimited and as different from the former as though it were in reality another element.*

While all physio-chemists assert that it is an active eliminator, depurent, disintegrant, resolvent, and perhaps, sorbefacient, and alterative, very few have taken the pains to investigate it in the light of a *materia alimentaria*, and hence a direct invigorator and renewer of the whole vital organism. Nor do we yet practically realize the evidently demonstrable fact that *there is no antiseptic known of equal potency with pure oxygen;* or that there is no known antiseptic compound which does not contain this vital element. It may yet transpire that all antiseptics depend for their special properties, directly or indirectly, on the free or feebly combined oxygen they contain. Should this presumption prove to be well founded it devolves on this micro-chemic age to devise methods for the convenient and successful use of the real and safe factor, to the exclusion of the noxious carbonized elements at present so largely composing antiseptic mixtures, and thus forever do away with carbolic, salicylic, and all other "antiseptic" septæmia!

Thus, Pasteur has demonstrated that by cultivating the disease-germ of chicken cholera for several generations in fluids having free access to the oxygen of the air it is gradually robbed of its virulence and eventually becomes inert; and Buchner succeeded in transforming the dreaded *bacillus anthracis* into the harmless *bacillus subtilis*—the hay bacillus—and *vice versa*, by repeated cultures in fluids freely supplied with oxygen or wholly deprived of the same, according to the results desired.

Prof. Law's[2] experiments with the virus of hog cholera fully confirm the foregoing results. The virus attains its maximum of virulence after cultivation in fluids occluded from free contact with the oxygen of the air, and is gradually, but surely, robbed of all malignancy by culture in fluids freely supplied with that element.

The same principle holds with regard to the propagation of yellow fever, typhoid fever, Asiatic cholera, diphtheria, croup, and the pleuro-pneumonia or lung-plague of cattle.

Another idea, not quite foreign to the subject, suggests itself: Has any chemical or physiological investigator queried whether the fundamental difference in the toxic tendencies of the two anæsthetics, ether and chloroform, is to be found by a comparison of their chemical composition? $CHCl_3$ = chloroform; $C_4H_{10}O$ = sulphuric ether. In the latter one equivalent of oxygen does duty, while in the former none of the elementary constituents would sustain animal life for a moment.

The question of ventilation in crowded cities, public buildings, and even in private dwellings, will eventually resolve itself into improved methods for supplying and distributing, in suitable quantities, artificial oxygen; and *if the bacillus tuberculosis prove to be a veritable entity—the essential factor in the induction and propagation of phthisis—then must we find in pure oxygen, by one mode or another of administration, its one efficient germicide and antidote!*

If Koch be right, then is mountain air and the air of new countries, in phthisis, but a removal from germ-fostering to germ-discouraging atmospheres. And whether he be right or wrong, bad air is the culture-fluid of all zymotic and germ-engendered diseases the world over.

The field of profitable investigation suggested is fairly exhaustless, but space forbids its further exploration in this connection.

Recurring to the practical side of the subject, I have personally used oxygen in only its simple gaseous form, and exclusively by inhalation. As to proportions and combinations, I have exhibited the gas, first, pure or undiluted; second, diluted with common air; and, third, admixed with nitrogen monoxide in various proportions.

In asphyxia from drowning or the inhalation of noxious gases, in threatened fatal syncope, suspended animation, and some other emergencies, as uræmic coma, chloroform or ether narcosis, opium-poisoning, etc., the first form of administration is indicated. For general use in chronic diseases the undiluted gas is seldom appropriate; but is to be modified by proper dilution, or associated with nitrogen monoxide in various proportions, according to the exigencies of each case.

The various methods of exhibition of this agent may be briefly adverted to:

1. *Direct inhalation* will probably always stand at the head of all methods.

2. *Cutaneous absorption* has been resorted to in Europe, and may be found advantageous in certain cases.

3. *Oxygenated water* is a feasible and pleasant medium for stomachal administration. It is prepared by saturating steam with the gas, at high pressure, and afterward condensing the steam.

4. *Oxygenated bread* has been used to some extent in England, and there is no reason why the "aërated bread" of our cities should not be easily transformed into *oxygenated* bread at will.

Of this bread Dr. Birch (*op. cit.*, p. 18 *et seq.*) says: "Its relative effect on the appetite is singular. Thus on the one hand (as might be expected) it stimulates the appetite when absent or capricious, while, on the other hand, it tends to produce such a feeling of epigastric fulness, when sufficient food has been taken, as to effectually suspend (if not satisfy) some morbidly craving appetites. . . .

"*In some cases* it will be found advantageously to supersede artificial pepsin, pancreatin, and even quinine and the mineral acids. . . . It is particularly indicated in cases of delicate children with continually recurring ascarides, functional derangement of the stomach and bowels, and mesenteric weakness."

In the matter of proportions and combinations, and as respects the quantity to be exhibited in a given case, there is as wide latitude for the exercise of professional discretion as in the compounding and selection of ordinary drugs.

That the use of oxygen in medical practice requires considerable time and care in its manipulation, and the exercise of much judgment and discrimination in its exhibition, and that impatient, over-sanguine, or careless practitioners will fail of satisfactory results in attempting it, is very true; but it may be made to add so largely to

[1] Read before the Franklin County (N. Y.) Medical Society, June 5, 1883.

[2] "Malignancy of Disease Germs Mitigated by Oxygen," The Medical Record, vol. xix., p. 673.

our therapeutic resources, is a desideratum in so many contingencies, and *the necessity for it increases so exactly in proportion to the increase of artificialness in the social and physical habits of modern society*, that the conscientious and painstaking physician of the future will undoubtedly avail himself of its aid in all appropriate conditions and emergencies.

The following cases are selected as representing the range of adaptability rather than any special features of the treatment. It will be noted in all of them that prompt and permanent aid to digestion and assimilation is a decidedly prominent if not the principal result.

CASE I.—Mrs. J. S——, aged thirty-nine, married, two children, the youngest several years old. By profession a singer and teacher of music. Family history includes phthisis, of which she lives in great fear. Each winter has severe bronchial and laryngeal troubles, with persistent cough. Anæmic, extremities habitually cold; pulse, 102 to 108; constant subclavicular pain; dyspnœa and fatigue on slight exertion; weak digestion with bowels habitually constipated. She expectorates rather copiously; sputa muco-purulent; and there is circumscribed dulness over the apex of the left lung. She is very despondent, and has no faith that any treatment will avail.

March 25th.—She presents for treatment and is placed on daily inhalations for thirty minutes at a sitting—℞. Oxygen, 25 volumes; nitrogen monoxide, 50 volumes; common air, 25 volumes. At a forced effort she can inspire 150 cubic inches of the mixture.

April 10th.—Improvement has been manifest from the first. The nitrogen monoxide acts as a wonderful calmative to the nervous system. She is no longer despondent; appetite much improved, coughs less, sputa reduced in quantity and less purulent. *Constipation effectually relieved.* Lung capacity, 190 cubic inches.

April 25th.—Resumed her music classes soon after last record. Improvement has been rapid and constant. Says she is "better than for many years;" eats, works, and sings with gusto. Considers herself "well," and treatment suspended.

(Observed this patient eight months later, no untoward symptoms reappearing.)

CASE II.—Mrs. C. L. W——, aged twenty-nine, married, one child aged five. Family history says father died of cancer of stomach; mother of cardiac disease. She has "weak lungs," and lives in perpetual dread of "consumption." Sense of constriction in left lung; circumscribed "sore spot" under the left clavicle; severe cough for several years past, and there is now some dulness on percussion over the left apex. Has been treated by eminent physicians without appreciable benefit; very anæmic; voice weak; no appetite; amenorrhœic for three years past; menstrual discharge, when present at all, is either profuse, acrid, and colorless, or greenish in color, scanty, and offensive. Has been subject to repeated attacks of severe nephralgia. Urine not examined.

May 23d.—This patient was placed on a mixture of—℞. Oxygen, nitrogen monoxide, āā 2 volumes; common air, 1 volume, of which she inhales, twice daily, three gallons at a sitting. Shows a lung capacity of 130 cubic inches.

June 1st.—Improvement already manifest. Feels "rested;" eats better; says the "soreness" has nearly left her. Can now inspire 165 cubic inches at an effort. Treatment continued twice daily.

June 15th.—Acute nephritis suddenly developed, or at least the chronic condition of those organs assumes a subacute form. Temperature, 102°; pulse, 122. Urine scanty, specific gravity 1.030; some albumen and casts. Oxygen suspended and hot hip-baths ordered, with demulcent drinks, to be followed by hot fomentations over the region of the kidneys.

June 25th.—The acute symptoms, which were somewhat alarming at last record, soon subsided, and general improvement is very evident. Lung capacity, 200 cubic inches. Oxygen was resumed 20th.

July 1st.—Improvement continues. Menses appear naturally and without unusual disturbance. Appetite excellent; walks two miles a day without fatigue, sleeps well, and gains flesh rapidly.

July 10th.—Patient continues to improve. Treatment reduced one-half and conjoined with chalybeates. Lung capacity increased to 225 cubic inches.

July 25th.—Treatment suspended. Patient returns to her friends very much rejoiced at her progress.

(Two years later this patient reported no return of former symptoms.)

CASE III.—Miss A. B——, nineteen years of age. Family history good, except that mother died young. Father, Judge ——, quite robust at sixty-eight. She has suffered from spasmodic asthma since childhood, the paroxysms occurring daily and on the slightest exposure. She is very delicate, anæmic, and fatigued on slight exertion. Has constant dyspnœa and marked cyanotic appearance. Appetite weak and capricious.

May 25th.—Placed patient on—℞. Oxygen, 1 volume; nitrogen monoxide, 4 volumes, of which she inhales five gallons, once daily, with the result of immediately relieving the dyspnœa. Her lung capacity is but 75 cubic inches.

June 4th.—Improvement has been steady. No more cyanosis; does not suffer from paroxysms; appetite fairly good. She inflates her lungs much better than at first; capacity, 100 cubic inches.

June 20th.—Proportion of oxygen increased to forty per cent. No return of paroxysms. General health greatly improved.

July 1st.—General improvement continues. From being caught in a storm has had one mild asthmatic paroxysm.

July 10th.—Patient can now endure active exercise without fatigue. Treatment continued every other day. Inspires 140 cubic inches.

July 25th.—Treatment has been irregular since last record, but patient's general health continues to improve; breathes, sleeps, and eats well. Exposes herself to changes of weather and temperature with impunity.

August 10th.—There has been no recurrence of the asthma, although patient asserts that she has repeatedly exposed herself to the same influences which invariably induced paroxysms previous to treatment. She is advised to continue the treatment at intervals, but as the family are about to remove from the city no further observations are practicable.

(November 30th.—This patient writes that she continues to enjoy excellent health, and has had but one asthmatic paroxysm since leaving the city—this from being drenched to the skin in a sudden rain-storm.)

CASE IV.—Miss E. L. C——, sixteen years of age. For three years past subject to epileptic convulsions. Family history shows the malady to be hereditary. Patient tall, slender, with stooping, awkward gait, languid attitude, flabby muscles, sallow complexion, feeble pulse, morbid appetite, and poor digestion. Complains of constant cephalalgia, and, in short is decidedly chlorotic. Has never menstruated, and her mother associates her malady with this fact.

August 13th.—Patient placed on—℞. Oxygen, 1 volume; atmospheric air, 2 volumes; four gallons at each daily sitting. Inhales but 60 cubic inches at an inspiration.

August 20th.—Mother reports that she sleeps better and does not have her nightly "fit." Can inspire 90 cubic inches at an effort. Ordered chalybeates and nutritious diet, for the latter of which she begins to show a natural desire.

August 30th.—Still no return of the paroxysms. Cephalalgia has disappeared; appetite, digestion, and general health much improved. Lung capacity, 100 cubic inches.

September 14th.—Proportion of free oxygen increased to fifty per cent; five gallons each sitting every other

day. Patient resumes her classes in school, walking several miles daily without fatigue. Inspires 105 cubic inches.

October 10th.—Slight convulsion after severe exposure, attending an evening political demonstration. Daily treatment resumed; same formula as at last record. Lung capacity increased to 115 cubic inches.

November 1st.—Improvement has been constant; appetite fairly insatiable; digestion excellent, and is one of the most boisterous of her class on the playground.

November 10th.—Treatment continued every other day. Catamenia appear, naturally and without disturbance.

November 25th.—Patient decidedly robust, and apparently, as she asserts herself, "perfectly well." Treatment suspended.

(Six months later there had been no return of the epilepsy; general health of the patient continuing excellent.)

Case V.—A. S——, aged fifty-one, married, several grown-up children; occupation, commission merchant. Has been twenty years an invalid; a confirmed dyspeptic, and suffers from constant and extreme nervous irritability and prostration (neurasthenia?). Constant frontal headache and frequently recurring paroxysms of a dull, benumbing pain referred to the medulla and base of the brain. Appetite wanting; constipation habitual, alternating occasionally with diarrhœa; extremities cold, is very despondent, and has suffered for years from a masked or "dumb" ague. Liver and spleen somewhat enlarged; urine turbid, specific gravity 1.030, abounds in alkaline phosphates, but deficient in urea and uric acid.

September 20th.—Daily treatment instituted, using—℞. Oxygen, nitrogen monoxide, āā four gallons at each sitting. Lung capacity, 160 cubic inches.

September 29th.—The evidence of retention of urea in the system corroborated, and the value of oxygen as an eliminator well illustrated. Crowding the treatment from day to day, patient last night inhaled eight gallons of the mixed gases. Urine now loaded with urea; specific gravity, 1.035. Treatment continued, the dosage diminished.

October 11th.—The disturbances noted after first week of treatment have nearly subsided. Urine nearly normal as to quantity, but still shows excess of urea; specific gravity, 1.028.

Mixture changed to—℞. Oxygen, 1 volume; nitrogen monoxide, 2 volumes; eight gallons at each daily sitting. Lung capacity increased to 200 cubic inches. Patient is less irritable, sleeps better, and feels greatly encouraged.

October 18th.—Improvement has been gradual but constant since last record. Cephalalgia is becoming a much less frequent symptom, and when present is less severe. Specific gravity of urine, 1.025.

November 11th.—Has steadily improved since last record, in spite of the drawback of constant business worry and overwork. Urine normal; lung capacity, 220 cubic inches.

November 20th.—Digestion good; sleeps well; no longer despondent or irritable; no headache; extremities in a comfortable glow; all his functions well performed. Treatment discontinued.

(Four months later this patient reported himself in active business and feeling strong and well.)

A Plea for a Homœopathic Test.—The sum of $25,000 has been offered to St. George's Hospital on condition that the money be devoted to a fair trial of homœopathy in the wards of that institution. The offer has been declined, at which the *Lancet* expresses great satisfaction. The only good reason for declining is that it has been often submitted to a fair test before, and unnecessary repetitions are dangerous.

TWO CASES OF CHOLO-CYSTOTOMY, WITH RECOVERY.

By MARTIN BURKE, M.D.,
NEW YORK.

The cases of successful incision of the gall-bladder are not, I believe, so numerous that the report of two cases would be without interest.

James W——, eighteen years of age, came to my office in the month of October, 1881. He entered almost crouchingly, and said he had a severe pain in his belly whenever he stood erect. I examined his abdomen, and found that almost under but to the right of the ensiform cartilage there was a small fluctuating tumor, painful upon pressure, and of the size of a duck's egg. The boy was jaundiced, but not markedly so, and his bowels appeared to move, although constipation had immediately preceded this attack of pain. His fever—and he had some fever—was not pronounced. The abdomen, save where the tumor existed, was free from pain upon pressure, and I diagnosed an abscess of either liver or gall-bladder. The boy's pulse, however, being strong, I felt inclined to think it was a suppurating gall-bladder, and this afterward was found to be the case. I ordered the boy home, told him to go to bed, to poultice the tumor, and prescribed quinine and opium. As I was leaving town the next day, I directed my friend, Dr. Kearny, to see the boy and to do what his judgment dictated. He agreed with my diagnosis and resolved to cut immediately, which he did during my absence, and reported that a large quantity of bile and pus came from the incision. About a week after this, I was astonished one morning to see the boy come into my office, and upon examining the fistula left by the knife, I found I could pass in a probe for about three inches, but as it then commenced to bleed I desisted. I saw the boy once again after this, and his fistula was entirely healed.

Mrs. K——, aged fifty, was seized about a year and a half ago with a violent pain in the right hypochondriac region. The pain was severe, and this region was terribly sensitive to the touch, but rest, opium, and poultices relieved the pain until it was bearable. Yet sensitiveness upon pressure was marked, and this continued until blistering and leeching had been tried repeatedly.

At length, indeed, Mrs. K—— was convalescing, but her health was not entirely restored. In May, 1883, she was taken with a similar attack, when I was again asked to see her.

This time leeching, blistering, and poulticing failed to reduce the sensitive spot, and indeed it appeared slowly to enlarge its limits and to become more painful. Continued applications of cantharidal collodion and poulticing were now regularly applied, and my father and myself resolved to open this enlarged and tender spot when we thought it safe to do so. Accordingly about eight weeks after the beginning of the second attack we opened an abscess from which were discharged fifty gall-stones, whose combined weight was one hundred and thirty grains. The poulticing was continued, and the wound washed out thoroughly every six hours. Our patient had some fever following the operation, but none to occasion alarm. A drainage-tube was kept in for three days only, when I removed it. I may remark that after about a week of continued convalescence the patient lost all appetite; this was restored by the use of the wine of Mariani, which I believe contains coca.

Henceforward all went well, and Mrs. K—— is now entirely well. At no time was she jaundiced. At no time did she lose courage, and her abiding faith in her medical attendants during the long, weary course of her illness made her case entirely free from the usual small anxieties which attend such cases. Such, then, are these two histories. One in a young male, one in a middle-aged woman. Severe pain noticed in both. In neither did a distinct chill occur, although in both pus occurred in large amount. In neither case was

jaundice noticed to any extent. The first case had a good history. In Mrs. K—— a rheumatic diathesis existed.

As regards differential diagnosis between abscess of liver and abscess of gall-bladder, I find the following characteristics. In this climate abscess of the liver follows, I think, either typhus fever or exhaustion consequent upon prolonged hard drinking. The tenderness in abscess of the liver is much further from the median line in the hypochondriac space than is the case in abscess of the gall-bladder. A prolonged chill or chills, very marked, usher in abscess of the liver; this was not the case in these two examples of the other disease. The constitutional disturbance is more marked in liver trouble. In both cases I should advise early incisions. I have the records of three cases of liver abscess, all fatal, in two of which I was so strongly advised by the consultant to aspirate that I did so, and delaying free incision until some days after, had occasion to regret it most bitterly.

Progress of Medical Science.

OTORRHŒA, WITH PERFORATION OF THE MEMBRANA TYMPANI.—Dr. Read J. McKay, of Wilmington, Del., having treated, during the past eleven years, two hundred and thirty cases of otorrhœa, or, more technically, chronic otitis media with purulent discharge, presents for consideration in *The American Journal of the Medical Sciences* for October, 1883, some clinical observations upon such cases with old perforations of the membrana tympani, and endeavors to show that they are not the unsatisfactory and irremediable class of aural diseases which they have been regarded, and perhaps still are, by many general practitioners as well as by the public generally. And because of the well-known dangers from caries and necrosis of the temporal bones, meningitis, cerebral abscess, and purulent infection, which sooner or later may, and often do ensue, when they are disregarded or neglected, they should not in the future, as in the past, be permitted by physicians to pass from under their observation without any, or carelessly directed, local and medical treatment. His earlier cases were treated by various caustic applications, and they required usually several months' treatment to relieve or cure them. The later ones were treated with finely powdered boracic acid (the dry method), packed in the ears, usually filling the meati the first few visits, which generally checked the purulent discharge in a few days and only required several weeks (usually about four) to relieve or cure them.

EXPERIMENTS IN THE USE OF NAPHTHOL FOR THE TREATMENT OF SKIN DISEASES.—Dr. Arthur Van Harlingen, of Philadelphia, reports in *The American Journal of the Medical Sciences* for October, 1883, the results of his experience with the use of this drug, which was first brought to the notice of the profession by Professor Kaposi, of Vienna, about two years ago. He finds it is one of the most efficient and agreeable remedies for *scabies* which has as yet been brought forward. Both in the rapidity of its action and in its beneficial effects upon the inflamed skin it is superior to any of the means ordinarily employed for the cure of this disease. Its exact place in dermatic therapeutics remains to be ascertained, but he is inclined to think that it will not prove an unimportant one. In eczema it has failed in his hands to give the same beneficial results as were obtained by Kaposi. In most cases of vesicular and in acute eczema generally its action is simply that of an irritant. On the other hand, it has a limited field of action in the cure of a certain number of cases of squamous eczema of the scalp. In his opinion it is a valuable addition to our external means of treatment in *psoriasis*. Kaposi speaks well of it in psoriasis of the scalp in particular, and his experience would lead him to place it near chrysarobin and pyrogallic acid in effectiveness without the neutralizing disadvantages of either of these drugs. In *seborrhœa* of the scalp naphthol is a decided addition to our means of treatment. While inferior in some respects to sulphur or carbolic acid, it has a certain range of usefulness which further experience will in all probability more exactly demonstrate. Naphthol is highly lauded by Kaposi in the treatment of *hyperidrosis*, but in Dr. Van Harlingen's hands it has failed entirely, although used strictly according to his formulæ. He considers it quite valueless in this disease, so far as his experience goes, which leads him to regard its effects in *ringworm* as inferior to almost all of the remedies at present used, and as almost entirely inefficient in most cases of *tinea versicolor*. In *pediculosis* he has had no experience, but in a single case of pediculosis capitis its action was favorable.

CARBOLIZED SAWDUST AS AN ANTISEPTIC DRESSING.—Mr. H. P. Symonds speaks favorably of this material in *The Lancet* of September 22, 1883. He soaks a quantity of coarse sawdust in a ten per cent. solution of carbolic acid in spirits of wine, and then allows it to dry slightly, so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used, it is enclosed in a bag made of several layers of gauze, and applied outside the deep dressing, the usual external dressings being put over it. The sawdust thus takes the place of the padding of gauze which is generally used. The advantages claimed for it are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. The writer says that the sawdust should be coarse, as he has found that if it is very fine it passes through the gauze and irritates the skin.

THE ANTAGONISM OF PARALDEHYDE TO STRYCHNIA.—Professor Cervello has recently published an interesting paper in *Archivio per le Scienze mediche*, vol. ii., No. 1, on the antagonistic action of paraldehyde and strychnia. The experiments which led him to regard the two drugs as antagonistic were made in several ways: by administering a large but not fatal dose of paraldehyde, and then a dose of strychnine; by administering fatal doses of strychnine, and then a dose of paraldehyde; and finally, by administering the two drugs at the same time. As a kind of control experiment, the animals were then given doses of one or the other of these agents alone, so that the experimenter could judge of the narcotic effect of the paraldehyde, and of the fatality of the strychnine. In whatever manner administered, it was made clear that paraldehyde antagonized the action of strychnia; nor was it necessary to administer more than a physiological dose of paraldehyde in order to observe this antagonistic effect. Indeed, so small a dose of the narcotic was sufficient as not to produce its physiological effects. Two and a half grammes of paraldehyde completely antagonized four milligrammes of nitrate of strychnia administered to a rabbit, a dose four times greater than that necessary to kill. Curiously enough, the administration of strychnia had no influence on paraldehyde narcosis. Its duration was the same, whether the narcotic was administered alone, or both drugs together; in fact, the narcosis lasted longer in the strychnized animal. The retardation of the respiratory movements is the same, and we may say that the phenomena of paraldehyde always predominate, as if it had been given alone. The antagonism, then, is not reciprocal. This antagonism seems, therefore, to be central: paraldehyde depressing, and strychnia exciting the reflex irritability of the cord.

VARIATIONS OF THE URINARY CHLORIDES.—No one will deny that a more frequent examination of the constituents of the urine might lead to the acquisition of fresh knowledge. Even in our public clinical institutions the systematic estimation of the most important urinary constituents is not regularly carried out. A com-

plete clinical account of the changes in the urine which accompany the active stages of the rachitic process would probably be attended with important additions to medical science. Indeed, the same may be said of most acute diseases. In ordinary medical attainments perhaps the only piece of information with regard to the chlorides of the urine consists in the knowledge of the fact that there is a remarkable diminution of this ingredient in acute pneumonia. M. Burot has done well to draw attention to this unploughed field of clinical medicine. He has devised a simple apparatus for the purpose of estimating the chlorides. A small flask is furnished at its inferior extremity with an ampulla capable of holding just one cubic centimeter of urine. A pipette is obtained, gauged in tenths of a cubic centimetre. Another little flask containing a solution of argentic nitrate is used, from which the pipette may suck up some of its contents by means of a ball of caoutchouc. A cubic centimetre of urine is first treated with a solution of potassic chromate. The solution of nitrate of silver of known strength is then dropped in by means of the pipette. The whole of the chlorides in the urine have been obtained as soon as the *café-au-lait* precipitate of chromate of silver appears. M. Burot found that the normal amount of chlorides in the urine was eleven grammes for every litre, consisting of ten grammes of chloride of sodium and one of chloride of calcium. In tuberculosis it was estimated that seventeen to eighteen grammes of chlorides per litre were discharged. But a diminution of the chlorides is of greater import, especially in acute affections. In pneumonia, when the temperature is much raised, the fall in chlorides is considerable. This diminution was not noted in broncho-pneumonia. But in the pneumonia of typhoid fever at the onset of death the chlorides completely vanished.—*The London Lancet*, September 29, 1883.

Animal Electricity.—Dr. McKendrick recently delivered a lecture on "Galvani and Animal Electricity," before the Southport meeting of the British Association (London *Lancet*, September 29, 1883). In summing up, the lecturer said that all electrical phenomena were really expressions of the vital changes occurring in living tissues under the action of stimuli. It was no part of the functions of nerves, muscles, or of the retina of the eye to produce electrical currents under the action of their relative stimuli; but such currents indicated chemical changes in the organs or tissues. For example, the contraction of a muscle is a movement following or consequent upon many chemical changes, among the results of which were the production of heat and differences of electrical potentiality. Thus, there was no special production of electricity except in the cases of electrical fishes, and possibly of some other animals. In most animals, including man, the production of currents was an incidental phenomenon, indicating chemical operations and nothing more. Besides, the currents so produced were feeble and evanescent, and bore no relation to the general well-being. Consequently, all attempts to influence the living body by magnets had no rational basis. It need hardly be said that the so-called phenomena of animal magnetism are of an entirely different kind from those discussed. These are of a subjective character, dependent on peculiar states of the nervous system, having nothing whatever to do with electricity or magnetism; but still in a sense they are phenomena as real as those of physical science. Their subjective character, however, renders them specially difficult of investigation, and consequently they are more liable to fall into the hands of the charlatan.

A New Tune on an Old String.—The following story is culled from the pages of *The California Medical Journal*, for October, 1883: "An old toper whose sober moments were harassed by a vixenish wife concluded to shuffle off, and loaded up with laudanum for that purpose. In a short time his wife discovered him in a state of narcotism, and, raising an alarm, sent off every one who came in for a physician. The first one who came was Smith, an old practitioner, who looked him over, pronounced him dead, and went away. Soon after, another old practitioner, Brown, came in, who also gave in the verdict 'dead,' and departed. Shortly the third one, Jones, a young practitioner, arrived, and, proceeding to a vigorous use of the stomach-pump and forced exercise, finally succeeded in bringing the old gentleman to his senses, and left, feeling that there was but one first-class doctor in that vicinity. In a few days he called around and presented his bill. 'What's this for?' inquired the would-be suicide. 'For saving your life the other night,' replied Jones. 'Well, I didn't ask you to. I never employed you, and I'll not pay it. You'd no business coming in here and jamming your old pump down my neck. Brown is my family physician, and I'll not pay anybody else,' was answered. Then Jones went away to Brown's office to try and get him to induce the man to pay the bill. 'Jones,' said Brown, looking out over the top of his spectacles, 'I never thought you a bad sort of a fellow, but you've done a very foolish thing, and it serves you right to lose your bill. Didn't I say he was dead?' 'Yes,' says Jones. 'Didn't Smith say he was dead?' 'Yes,' says Jones. 'Well, that settled it. The man was dead to all intents and purposes, and you had no right to say that he was not. When two old experienced doctors like Smith and me say a man is dead, it's unprofessional and discourteous for a young man, a beginner in practice, to dispute their word. We'll forgive you this time, because of your youth and inexperience, and will hush the matter up for you, but be very careful in the future and make no more such mistakes.'"

The Early Treatment of Fractures.—Mr. Christopher Heath in the *British Medical Journal*, endeavors to induce surgeons to have more faith in the early treatment of fractures by plaster-of-Paris than appears as yet at all general, and thus to save their patients and themselves an infinity of trouble. In his paper he quotes from the "Aphorisms" of the late Dr. Cowling, of Louisville, the following, which he regards as full of common sense: "Carved and manufactured splints generally fit nobody, and are to be rejected, as not only expensive, but damaging." "The application of the roller-bandage immediately to the skin, whether as a protective or to prevent muscular spasm, has resulted in such disaster that it is one of the curiosities of surgery how it could be repeated at this day. When cotton is placed over such a bandage, it forms an absurdity scarcely credible in a man of ordinary sense." "Continued extension and counter-extension, are, as a rule, not necessary to prevent shortening in fractures. This is best done by removing the causes which lead to muscular spasm: 1st, by early and as complete reposition of the fragments as possible; 2d, by the smooth application of cotton-batting to the limb; 3d, by the equal pressure of a bandage extending from the distal end of the limb to a point beyond the joint above the fracture; 4th, by the accurate fitting of the splints or plastic material for support; 5th, by as little interference afterward as possible."

Stewed Fruit for the Gouty and Dyspeptic.—Dr. Milner Fothergill recommends the use of stewed fruits in many instances of gout and dyspepsia. Sugar is undoubtedly objectionable to many, but it is by no means necessary to add sugar to stewed fruit. If the acidity be neutralized by an alkali, little or no sugar is required. Thrifty housewives have long been familiar with the fact that the addition of a small quantity of bicarbonate of soda to stewed fruit reduces the acidity, so as to save the necessity for much sugar. If about as much bicarbonate of potash as will lie on a shilling (English) be added to each pound of fruit, it will be found sufficient to neutralize the acidity, and to bring out the natural sweetness. Milk puddings and stewed fruits are excellent for the dyspeptic, the bilious, and the gouty.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 10, 1883.

FRANCIS GALTON AND PROGRESS BY HEREDITY.

FRANCIS GALTON, in a recent remarkable work, has brought out many curious facts not in accord with common opinion. The qualities of men, according to him, are usually hereditary, not accidental, and life is a prolonged viriculture in which progress depends more upon marriage customs and birth-rates than on the institutions on which we are wont to plume ourselves. Our culture has gotten ahead of our brain capacity, so that only a small minority has the mental ability to profit by the advances which the leaders of thought have made. Two things, according to Galton, are necessary in order that civilization may move steadily forward: there must be a selection of the best, and a transmission of their qualities to their descendants. Where selection works, as it often does at this day, to attract the most vigorous to the cities, and reward them with success, accompanied with desires, cares, and vices which delay their marriage, and prevent their having children, it is positively injurious to the community. There is some immediate gain—more money made, or more books written; but the next generation is drawn from poorer sources, and if this process goes far enough, decay must set in. We must remember how often great nations have begun to rot in the height of their prosperity. We see Athens full of men of marvellous genius; but they do not marry, and at last their places are filled by slaves, retaining the Pyrrhic dance without the Pyrrhic phalanx. We see Rome, with a greater vitality, rising to be mistress of the world, but after a time her close family ties are sapped by luxury, and the same decay sets in. Her farms are depopulated and her fields are untilled. She calls in barbarians to fill her ranks, and falls before them from sheer exhaustion. The Ottoman Empire has gone through the same changes, and the danger is a threatening one to us today. In Australia and our own great West, the English race multiplies apace, but in New England the old families are dying out, and it is plainly falling back before the more prolific Celt; and in the South the blacks are multiplying nearly twice as fast as the whites; so that in another century, instead of being only half as numerous, they will have become two to one.

The only remedy which Mr. Galton points out is *stirpiculture*. The object of the better part of the community must be the elevation of their own family and race. Attempts must be made, and will be made when a broader and more intelligent philanthropy prevails, to insure the fertility of the better portion, and the comparative sterility of the meaner portion of the community. If, he says, we are convinced that the only way of upraising a race is by securing the success of its best elements in the remorseless contest in which the strongest shall prosper, and hand down their traits to the next generation, while the weaker perish without leaving a trace, then the birth-rate becomes the most important test of progress, the pulse-beat of national life. The primitive passions for kindred and race are exalted again to the highest dignity; and thus we call to our aid two powerful emotions which the last century frowned upon, but which are yet among the most potent that sway mankind—family pride and patriotism. The man of health and ability who does not become a father is little better than a wrong-doer, from Galton's point of view, and the whole burden of his scheme is against the American ideal of home life, with its independent members so slightly bound to each other.

With regard to the treatment of paupers and criminals he is somewhat severe. The criminal class is generally infertile, but such instances as the Jakes family, with its five generations of criminals and paupers, show the danger. Imprisonment for life, or exile to a penal colony, where there is no intermixture of the sexes, would often be necessary, for crime becomes a disease to be stamped out, like the cattle plague. Pauperism would have much of the same character, and indiscriminate charity would acquire a new degree of wrongfulness. Indeed, the whole field of private charity and out-door relief would be much restricted, with a corresponding extension of the poor-house system. The reception of paupers and criminals from abroad becomes a wrong to the next generation, whose patrimony is squandered. The Chinese may increase our wealth, but wealth is not the object of living.

Galton's conclusions, in short, would kill out the Indian and the negro, and would make the extermination of the inferior races generally a virtue, if not a duty; and being opposed, as Mr. Holland admits, to our most cherished instincts, our purest aspirations, it is doubtful if, for some centuries to come, the race shall have become evolved to the point where the social science of this powerful thinker shall be law.

CEREBRAL MOTOR LOCALIZATIONS.

MM. CHARCOT and PITRES have just finished a series of articles (*Revue de Médecine*) in which they have analyzed one hundred and eighty-five cases illustrating motor localization in the cerebral cortex. The cases are all of comparatively recent date, and have been carefully reported. The conclusions which these observers draw are more definite and positive than any yet made. After analyzing in detail the cases supposed to oppose the doctrine of cortical motor localization, some defective point is found in all, and it is emphatically stated "That there does not exist a single rigorous observation of a destructive lesion outside the cortical motor zone which has caused permanent paralysis. That there does not exist a single rigorous observation of a destructive lesion involving these centres which has not caused a permanent paralysis on the opposite side of the body."

More specifically our authors announce the following very interesting and important conclusions:

1. The cortex of the cerebral hemispheres in man may be divided, functionally, into two parts: motor and non-motor, according as destructive lesions do or do not cause permanent paralysis of the opposite side of the body.

2. *The non-motor zone* comprehends: a. All the prefrontal region of the brain (orbital lobe, 1st, 2d, and 3d frontal convolutions). b. All the occipito-parietal region (occipital lobe, superior and inferior parietal lobules). c. All the tempero-sphenoidal lobe.

3. The *motor zone* includes only the ascending frontal and ascending parietal convolutions and the paracentral lobule.

4. The paralysis produced by destructive lesions of the motor zone have different clinical forms according to the location of the lesion. Thus, complete hemiplegias of cortical origin are produced by diffused lesions of the ascending convolutions; partial paralyses are produced by circumscribed lesions of these same convolutions. The location of the lesion in some of these partial paralyses or monoplegias can be determined. MM. Charcot and Pitres announce the following as data for such determination: a. The brachio-facial monoplegias coincide with lesions in the inferior half of the ascending convolutions. b. The brachio-crural monoplegias coincide with lesions in the upper half of the ascending convolutions. c. The facial and lingual monoplegias depend upon very circumscribed lesions of the lower extremity of the ascending convolutions, particularly of the ascending frontal. d. The brachial monoplegias depend upon a very limited lesion of the motor zone; particularly of the middle third of the ascending frontal. e. The crural monoplegias depend upon very limited lesions of the paracentral lobule.

5. Whether those paralyses caused by destructive lesions be general or limited, they will in time be followed by secondary contractures of the paralyzed muscles, with descending degenerations of the voluntary pyramidal tracts.

6. Irritative lesions of the cortex can give rise to epileptiform convolutions (partial or Jacksonian epilepsy), which are different from those of true epilepsy. They begin with a motor aura, and may be either generalized or limited.

7. In general the irritative lesions which cause epileptiform convulsions are located at or near those centres which, if destroyed, would cause paralyses in the muscles affected by the convulsion. But these lesions may be even in the non-motor zone, and their relation to the functionally affected centres is not so close as is that of paralyses and destructive lesions.

In conclusion the authors reaffirm their belief that no facts opposed to the doctrine of cerebral motor localizations have been established. Their own observations and studies, as shown above, do not so much add that which is new as they make definite and certain our previous views. They contradict, to some extent, the conclusions of Exner regarding the existence of diffused and overlapping centres. We are inclined to believe, however, that the method employed by Charcot and Pitres is more trustworthy than the unusual one adopted by Exner.

REV. DR. BUCKLEY AND NEWTON THE HEALER.

The Rev. Dr. J. M. Buckley, the projector of the Methodist Hospital of Brooklyn, and the trenchant editor of *The Christian Advocate*, is doing a good work in making clear and definite the dividing line between the medical and clerical domain. He sharply supervises his advertising columns, much to the disgust of the omnipresent quack and the enterprising patent-medicine proprietor. In all our strictures upon the alliance between the religious newspaper and the healers who play upon the credulity of the gullible, we gladly except *The Christian Advocate*. The very few advertisements which to the profession may be "off color," and which appear at intervals in the weekly mentioned, are probably in fulfilment of old contracts over which the present editor had no control. In a recent letter having the deceased "Dr." J. R. Newton for its subject, Dr. Buckley states that he "had been acquainted with him for the past eighteen years, and had various conversations with him concerning his healing powers, and that he believed him to have been fully equal, as a healer, if not superior, to Dr. Cullis, Mrs. Mix, Miss Moseman, the Rev. Mr. Simpson, George O. Barnes, and vastly superior to the impostor, 'Dr.' Monck." He also says that "in 1865 there came to the city of Detroit, where the writer then resided, a pupil of Dr. Newton, 'Dr.' Bryant, who had an extraordinary career there, and performed cures apparently as well as Newton himself. In company with the Rev. J. P. Scott, a noted Presbyterian minister of that city, he visited him, saw him operate upon half a score or more of persons, and was operated upon himself."

A retarded voyage upon the Mississippi gave the editor, during the four days so spent, an opportunity of long conversations with "Dr." Newton concerning his career and principles of cure. He says that his conviction was that he believed in himself, and that he would use every possible means to accomplish the ends that he had in view. He saw that he could glide from fanaticism into hypocrisy, and from hypocrisy back into fanaticism, and from either into common sense and simplicity, with the rapidity of thought.

Newton told him that he was under the control of spirits, who impressed him what to do in every case. He saw him operate on a wen of small size, which had not visibly increased for the space of five years, on the head of a passenger with whom he was acquainted. He placed his thumb upon it, and pressing with all his power, and moving it sideways, he said, "I am impressed to paralyze that duct." This showed that he had some knowledge of the course of the growth of wens. (He learned afterward that the wen remained *in statu quo* for about two years, when it began to increase rapidly in size, and was removed by the knife of the surgeon.)

In the course of his narrative, Dr. Buckley says that he happened to mention having seen Dr. Bryant, when instantly Dr. Newton denounced Dr. Bryant as an "unmitigated fraud." "He has no genuine healing power." He claimed that he himself had cured Bryant of a malignant disease with which he had found him suffering in a hospital; that the said Bryant had acted as his amanuensis for some time, and had then left him, and ever since acted in opposition to him. Knowing that the manipulations of Bryant had been followed by some

extraordinary results in Detroit, our editor said to Dr. Newton:

"Doctor, if Bryant is an 'unmitigated fraud,' how do you account for the cures he made?"

"Oh," said the doctor, "it is all accomplished by the faith of the people, and the concentration of their minds upon his operations with the expectation of being cured. Now," said he, "nobody would go to see Bryant, unless they had some faith that he might cure them, and the moment he begins his operations with great positiveness of manner, and when they see the crutches he has there, and hear other people testify that they have been cured, it produces a tremendous influence upon them. Then he gets them started in the way of exercising, and they do a good many things that they thought they could not do, their appetites and spirits revive, and, if toning them up can possibly overcome the diseased tendency, they improve, and many of them get well."

"Doctor, pardon me," continued the clergyman, "is not that a correct account of the manner in which you perform cures which are connected with your wonderful works?"

"Oh, no," said he, "the difference between a genuine healer and a quack like Bryant is as wide as the poles."

The inadvertent admission of "the healer" to his interrogator brings out the following remarks:

"His (Newton's) theory about the spirits suggesting things is simply a mystical description of the operation of the laws of association. Those laws furnish the Indians, the Turks, the Hindus, and the old Scotch poets of Ossian's (?) time with their poetry, the harpers of Ireland with their music, Patrick Henry with his eloquence, the spiritualists with their nonsense, and exhorters and extemporaneous preachers and orators with their language, though a belief in either spirits or supernatural aid is a wonderful stimulant to their action.

"As Christians we believe that the Holy Spirit has constant access to our hearts and minds, moving upon us by arousing our emotions and stimulating and guiding our thoughts through the natural laws of mind. Thus we expect and rely upon His aid. To expect Him to give ideas *ab extra*, as these spiritists claim, and as Newton told me, is, as Wesley and all rational Christians have shown, fanaticism, ending in Antinomian debauchery or insanity."

Against this logic, we have naught to say—it has a Baconian ring about it. Were all our clerical brethren less ready to endorse "faith cures" as such, there would be no room for certain extravagant devices on the part of those who seek to unite the functions of both professions. We therefore congratulate the Rev. Dr. Buckley as being a pioneer in an almost unexplored territory.

THE DISEASE OF THE POTATO DIGGERS.

Dr. W. Zenker, of Stettin, has recently given a description (*Berliner Med. Wochenschrift*) of a "new disease" which affects farm-laborers, particularly those engaged in digging and gathering potatoes. Dr. Zenker calls it a "new disease" in the sense that it has not before been described. He believes, however, that it must have existed for a long time among the peasantry of Germany and all agricultural regions. The disease is thought to be a neurosis of the locomotor apparatus of the feet and legs, the thighs and trunk not being affected. It is caused by the peculiar strained position into which the legs and feet are thrown while digging and gathering potatoes. The laborer, says Zenker, stoops down and supports himself upon the knees and feet. He moves about in this position with the knees strongly bent and feet strongly extended, and he keeps at this for hour after hour for many successive days. The position is not a natural or easy one, and any beginner who attempts it will soon feel a weariness and numbness in the limbs.

The result of this kind of labor is that in some cases one or both feet and legs become paretic, the paresis affecting both motion and sensation. The patient finds that one extremity feels heavy, cold, numb, and sometimes painful, and the foot drags in walking. The physician on examining it finds that the movements of flexion and extension are slow and weak, lateral motion is limited. The affected leg feels colder to the touch than the healthy one. Tests show a loss of pathic and tactile sensation almost complete. In some cases electric currents are but slightly felt, while both faradic and galvanic reactions, though present, are feebler than normal. The leg does not atrophy.

A case of this kind may rapidly improve, or it may continue almost in *statu quo* for several years; the patient still walks about, though with a limping gait. The treatment has, so far, consisted in foot-baths, massage, and electricity. It has not always proved successful.

Dr. Zenker reports in detail only five cases, but he believes that the disease cannot be a very rare one in the autumn months, and begs that other physicians practicing in the country will report the results of their observations.

We are unable to say whether any such affection as Zenker describes exists in this country. It has not been described as yet in any American text-book. It would be a matter of interest to know whether any of our readers have come across the disease.

THE GROUND FOR STATE INTERFERENCE IN REGULATING MEDICAL PRACTICE.

Professor Huxley, whose great scientific attainments have not evolved any false modesty as to the value of his own opinions, has set our English brethren by the ears in the matter of medical reform. In an address delivered recently at the London Hospital he speaks kindly of the Medical Council; he advises a preliminary technical rather than general training, and urges a greater specialization of teaching and of the profession. All of this is badly received by the medical journals, and the address is mildly censured as a "vacation effort."

But apart from these particular points, which have no great interest here, Professor Huxley touched upon another subject, which is of very great moment. This was the subject of the relation of the State to the medical profession. Upon what ground has the doctor a right to ask the State to interfere in the matter of regulating medical practice? is the question which he puts to his hearers.

Now, in many of the States at present efforts are making to secure the intervention of Government and the regulation of medical practice. It is important that

the reasons for making this demand be distinctly understood.

The ground for State intervention, according to Huxley, is not the protection of the public against incompetency or quackery. If such protection were advisable, he says, it is not practicable, as it would be impossible to prevent any one from buying drugs or seeking advice of whom he pleased. The right of the State to intervene is based on the fact, first, that it is of great importance to the community that no man shall die without the cause of his death being formally certified; second, that the law shall be able to appeal to recognized experts in civil and criminal cases; and, third, that the Government shall have a guarantee of the competence of persons appointed to the numerous medical appointments at its disposal. It is no interference with the freedom of medical practice if the Government says to the medical practitioner, "We will not accept your certificate of death; we will not regard your evidence as that of a medical expert; and we will not take you into our service unless you produce evidence which satisfies us of your medical competency."

The reasons thus expressed are, we believe, legitimate and unanswerable; but it follows that in order to make the people feel the need and justice of regulating medical practice, they must also appreciate the value of a registration of vital statistics. The further statement of Professor Huxley that a government cannot and should not attempt legally to protect itself against quacks is somewhat too strong. Not long ago a well-advertised quack in this city killed a man with an overdose of mandrake. Why should not Government apply preventive medicine to ignorant charlatans such as this man as well as to typhus fever?

THE MURIATE OF LIME IN THE TREATMENT OF SO-CALLED SCROFULOUS TUMORS.

Old, but good remedies are often forgotten in the pursuit of the new. In Dr. James Sanders' treatise on scrofula and consumption, page 112, we read: "I think I have ascertained that the muriate of lime has a more powerful effect in removing indolent scrofulous tumors than any other substance used as remedy; but that when they become open sores it is almost useless. It is a very manageable substance, the dose of which may be gradually increased from five or six grains three or four times a day to two drachms in the twenty-four hours. And I have never observed it produce any disagreeable effects, except of the slightest kind, and then only after its use had been long continued and the quantity of the dose had become very great." Dr. Sanders' book was published in 1808, and he was one of the presidents of the Royal Medical and Royal Physical Societies of Edinburgh. He continues: "Six years ago I observed with admiration its effects in a young lady, who was so disfigured by these swellings that the apex of her head was that of a cone resting on her shoulders. During the use of the muriate for six months her neck resumed its proper shape, and there scarcely remained an unusual enlargement of any gland; and since that time I have never seen it administered in similar circumstances without producing beneficial effects. I have tried it frequently and think it has always proved useful, sometimes eminently so. A young gentleman, aged nineteen, had the glands of his neck very much enlarged from his infancy; his skin was rough, fissured and oozing [with eczema], and he had all the pulmonary signs of incipient phthisis, with frequent attacks of hæmoptysis. During the use of the muriate for several months, the skin healed, the glands diminished in size, the pectoral complaints were removed, and the strength of his body was improved. A girl of nine years had the glands of her neck somewhat, but the parotid and tonsillary glands enormously enlarged, so that the latter seemed almost entirely to fill the fauces. She had occasional attacks of dyspnœa, teasing cough, copious expectoration of transparent, clammy, or frothy matter, when she began to take five grains of the muriate in solution, twice a day, and gradually increased the dose. The swellings soon diminished, and the pectoral complaints were much mitigated. At the end of six months she was taking nearly two drachms of the medicine a day, and seemed nearly well; three drachms seemed to cause squeamishness at the stomach, and the quantity was therefore lessened. She continued to take small doses for a year, when the visible tumors had almost disappeared, while the signs of the internal affection had signally decreased."

MEDICINE IN MISSISSIPPI.

Some time ago we called attention to some of the peculiar features in the practice of medicine in Missouri, as depicted with an honest and unsparing hand by the President of the State Medical Society. Our editorial received wide notice, and we have reason to believe that it produced much good, more especially in awakening other States to a little introspective study.

There has appeared in the *Mississippi Valley Medical Monthly* an article from the pen of Dr. G. S. Holmes, of Benton, Miss., entitled "The Medical Profession in Mississippi," from which we gather that medical practice in that State is in a not much happier condition than it is or was in Missouri. Dr. Holmes writes with much more than ordinary eloquence and force, and the picture which he draws, if in any way a true one, certainly deserves earnest attention.

There are in Mississippi about 1,800 doctors in a population of 1,200,000. This gives a ratio of 1 to 666, which shows that the doctors are quite numerous for a State which is not wealthy, and which has not a large population. Last year the Legislature passed a bill "to regulate the practice of medicine," and some congratulations have been extended upon the fact. Dr. Holmes, however, deplores it. The peculiar legal verbiage, he says, of the section calling for a license, made it *compulsory* upon the State Board of Health to issue a *license to every applicant* without regard to qualification, provided that "such application was duly sworn to, and accompanied, honored and substantiated, dignified and glorified by the paltry sum of ten cents." Under this section, therefore, nearly all of the one thousand eight hundred practitioners have obtained a license and are regularly constituted physicians, while, in Dr. Holmes's opinion, "two out of every five of this number are totally unworthy of the privilege." "We know," he says, "of no less than a half dozen M.D.'s in a radius of ten miles,

who, having failed generally at their former trades, have taken up the less honorable one of Mississippi medical practice."

"In the good old ante-bellum days," he continues, "of wealth, independence, and luxury in the South, the medical practitioner was regarded as possessing something of more than ordinary social status; not because his pocket jingled with the dross by which now a gentleman's principles and virtues are estimated, but from the less adulterated worth which attaches itself to moral and intellectual culture. The title of M.D. commanded respect from its significance alone, because it was but exceptionally deserving of it. But alas! the change 'twixt then and now. It is true that we are as yet in the wake of a terrible revolution, but can that explain the retrogradation of the poor commercial *trade* of to-day, which once characterized the intellectual, moral, social, and professional dignity of Mississippi? Ignored by the civil laws and unprotected from imposition, it is a compliment to the medical practice in this State to be admitted a respectable trade. There is not practised in the Union to-day an avocation of more subjection, servitude, and dependence than that of medicine in Mississippi. Under the civil laws of the State, a doctor is expected to do his practice for almost less than gratitude, and to place his claim for services upon the charity of the ungrateful, while he is ostracized and abused for exorbitance in his price, and taxed beyond his capacity to pay on the profits (?) of his profession. Ignored in all things else, he is never forgotten when needed in the *harangues* of petty courts for that professional opinion which he has made valuable to himself by years of laborious toil and study, to say nothing of the outlay of money."

We trust that our eloquent author looks too much upon the dark side. If he does not, there is need, as he says, that the profession organize for its own protection.

FATAL CATHETER FEVER.

At the opening meeting of the Clinical Society of London, Sir Andrew Clark made a communication of much interest upon the subject of what might be called "Fatal Catheter Fever."

He said that in 1870 a man, who was otherwise in good health, consulted him for slight incontinence of urine. He consulted a specialist, who found his prostate enlarged and his bladder unable to empty itself, and advised him to use a catheter. Four days later he was taken ill; the urine contained a little pus; pulse, 120; temperature 100°. After two days the temperature rose higher, the pulse became more frequent, and in eight or nine days he died; the bladder was inflamed, and the kidneys were reported to be healthy. Since 1870 Dr. Clark had seen four or five such cases every year. He had not been able to gather sufficient information on this malady, which was not very uncommon. He was not alluding, of course, to the slight rigors after catheterism, but to a fever which generally ended fatally.

In commenting on this class of cases the *Lancet* states that they do not occur in men who have been previously free from disease of the urinary organs. There is a history of chronic stricture, enlarged prostate, and vesical atony. The suggestion is made that there is, with this, a chronic interstitial nephritis affecting especially the cortex. The slight irritant effect of catheterization sets up an acute nephritis, which ends in suppuration and causes death.

The "fatal catheter fever" is not, according to Dr. Clark, very uncommon.

News of the Week.

A Scottish Weekly Medical Journal.—A weekly medical journal, called the *Edinburgh Clinical and Pathological Journal*, has been issued in Scotland, Drs. Graham Brown, Cathcart, and D. Bery Hart, being editors.

The German Cholera Commission.—Dr. Koch has applied for permission to continue his researches into the nature of cholera in India. This permission has been granted him by Bismarck, and he will start for Bombay when his work in Egypt is finished.

Woman's Medical College of the New York Infirmary.—Dr. William O. Moore has been appointed Professor of Eye and Ear Diseases, in place of Dr. Charles Stedman Bull, resigned.

Flight of a Bogus Physician.—The daily papers state that W. H. Coney, who for three years past has been running a bogus medical college in Milwaukee, Wis., despite all efforts of the authorities to suppress the concern, has decamped, deserting his family. He was a hostler to a surgeon in the British Army, and gained some slight knowledge of medicine. He secured a bogus diploma, and soon after his arrival in Milwaukee began practising medicine. He opened a medical college, and turned out about sixty graduates, the most of whom are practising illegally in Wisconsin and Minnesota. Coney's bogus concern, through some hocus-pocus legislation, secured a charter from the Legislature, and all efforts to suppress it proved futile.

Surgeon-General John B. Hamilton, U. S. Marine Hospital Service, has been tendered the Chair of Surgery in the Georgetown Medical College, and signified his acceptance of the same, having resigned a similar position in the Medical Department of Columbia University which he was temporarily filling during the absence of Prof. J. Ford Thompson in Europe.

Dr. James R. Lewis, the oldest physician of Luzerne County, died at his home in Trucksville, Pa., on November 3d. He had been in continuous practice since 1832.

Medical Students in the London Schools.—The lists show the matriculation of six hundred and ninety-three new students in thirteen medical schools, St. Bartholomew's and University leading.

Edinburgh University has nearly reached its three hundredth anniversary. In 1883 its students numbered three thousand three hundred and forty, and when its new buildings are completed it will be the largest university in the world.

Another Successful Resection of the Pylorus.—Dr. Viktor V. Hacker, of Vienna, reports in the *Wiener Medicinische Wochenschrift* another successful

case of resection of the pylorus. The patient was a woman forty-six years of age, who had suffered from symptoms of pyloric disease for only a year. In June, 1883, the diagnosis was easily made of cancer, a tumor being felt. Billroth operated. The woman recovered, and is now (October) well.

PROFESSOR ACLAND, of Oxford University, has been made a Companion of the Order of the Bath. This has nothing to do with Professor Acland's contributions to hydrotherapy.

THE PHILADELPHIA MEDICAL CLUB is the title of a new Society recently organized in Philadelphia.

A CONGRESS FOR THE DISCUSSION OF CHOLERA QUESTIONS was held in St. Petersburg last month.

THE HEALTH OF THE ARMY; THE ARMY MEDICAL MUSEUM AND LIBRARY.—The report of the Surgeon-General of the Army for the fiscal year ended June 30, 1883, prepared by the late Surgeon-General Crane, has been made public. In a chapter on the health of the army during the fiscal year, the report says: "Among the white troops the total number of cases of all kinds taken on the sick list was 37,697, being at the rate of 1,802 per 1,000 of mean strength, an increase of 123 cases per 1,000 over the number reported for the previous year, and 68 per 1,000 over the average decennial rate of admission. The total number of deaths from all causes reported among the white troops was 214, or 10 per 1,000 of mean strength. The total number of white soldiers reported to have been discharged from the service for disability was 879. Among the colored troops the total number of cases of all kinds reported was 4,689. The total number of deaths of colored soldiers reported from all causes was 26. The total number of colored soldiers reported to have been discharged for disability was 101. The total number of cases reported among the Indian scouts was 44, and the total number of deaths was 2. Diseases of the respiratory organs stand first in numerical importance, of which about sixty-four per cent. are catarrhs of the upper air-passages. Extremes of variation in temperature will account in part for the frequency of these diseases, but to a larger extent insufficient ventilation of barracks and dormitories, as well as irregular and unequal distribution of artificial heat during cold weather, must be held responsible. Wounds, injuries, and accidents stand second on the list of causes impairing the effectiveness of the army. The large number recorded in this class may probably be attributed to the use of troops in mechanical and laborious employments, which form so large a proportion of the soldier's duties. As an indication of the peculiar hardships to which our troops are exposed, the rates of admission for wounds, accidents, and injuries are 122 per 1,000 higher than those reported for the German army, and 142 per 1,000 higher than the decennial rate of the British army. It is interesting to note that the colored troops make a particularly favorable showing in the small number of admissions for alcoholism and its results, exhibiting, as they do, a rate of only 4 per 1,000 to a rate of 76 per 1,000 of mean strength among the whites. On the other hand, in diseases of the nervous system they have an unexplained preponderance. The number of recruits reported to have been examined by army medical officers and private physicians during the year is 5,964 white, 426 black, and 247 Indian scouts. The total number of rejections was for white 2,063, or 346 per 1,000 of the number examined, and for black 131, or 307 per 1,000; Indian scouts, none.

The additions to the library during the past year include 3,912 volumes and about 5,000 pamphlets, making the total number in the collection about 60,000 volumes and 68,700 pamphlets. Six hundred and thirty-eight specimens were added during the last fiscal year to the collection of the Army Medical Museum. Ninety-four of these were purchased, and 544 were contributions either by medical officers of the army or by civil practitioners and other citizens.

A DEPARTURE IN FRENCH JOURNALISM.—It is very rare that French journals take any notice of medical events in other countries than France. In a recent issue of *Le Progrès Médicale*, however, appeared a very good account of the meeting of one of the sections of the "Association Médicale Americain," at Cleveland last June.

THE NEW CZECHISH UNIVERSITY at Prague is already in trouble. The students of the Bohemian and German schools are at odds and frequently quarrel. Lately the ill-feeling has extended to the Bohemian and German midwives, who are quarrelling over their teachers. Facts seem to justify the fear that the establishment of the new University would injure the peace and harmony of medical Prague.

THE YELLOW FEVER has about disappeared from the United States, but continues to hold sway among the Pacific coast States of Mexico. Assistant Surgeon Main, U.S.M.H.S., reports that the following Mexican cities and towns are suffering with the disease: Guaymas, Bazos, Jalisco, Manzanillo, Ixcatlan, Atar, Yuki, Altata, Acapulco, San Blas, La Paz, Culiacan, Mazatlan, and a number of the villages near the mountains. It has been particularly fatal among miners. In one camp of a hundred miners only nine are reported to have escaped death. In La Paz five thousand cases were reported up to October 28th, but the mortality was not given. The Governors of the infected States are taking the matter in hand and have issued very stringent orders against exhuming those who have died of yellow fever, and are doing everything possible to alleviate the suffering of their people by ordering free burials, paying the expenses of the sick poor, etc.

Sanitary Inspector Mainegra reports from Vera Cruz the inspection of the following named vessels bound to United States ports, up to October 28th: steamer City of Alexandria for New York, bark St. Cloud for New York, steamer California for New Orleans, bark Chapman for Galveston, bark Keewarden for Mobile, steamer City of Mexico for New Orleans, schooner Seguin for New Orleans, schooner Forest Home for Pascagoula, steamer Whiting for New Orleans, steamer City of Washington for New York—all in good sanitary condition.

Sanitary Inspector Burgess reports from Havana the inspection of the following named vessels bound to United States ports, up to October 27th: American schooner Nonpareil for Key West, Spanish brig Vilasar for Charleston—seventy days in port, twenty-five at a suspicious wharf, vessel disinfected; Spanish brig Maria Teresa for

New Orleans—fifty-four days in port, thirty at suspicious wharf, disinfected; Spanish brig Guadalquiver for Doboy, Ga.—thirty days in port, twenty-one at suspicious wharf, disinfected; American steamer Niagara for New York, American steamer City of Alexandria for New York, and schooner Grover G. King for Key West; Spanish steamer Pedro for Charleston, disinfected; Spanish steamer Apolo for Savannah, disinfected—these last two vessels were not at dock in Havana, but were from infected ports of Cuba previously, and were disinfected at request of their masters. There were twenty deaths from yellow fever at Havana during the week ending October 26th.

A National Hygienic Congress was held in the City of Mexico on October 10th, at which a petition was prepared for presentation to Congress, asking that the Constitution be amended by the addition of an article placing all sanitary regulations under the jurisdiction of the general Government. The proceedings of the Congress have not yet been received.

The State Department is in receipt of letters from the consuls at La Paz and Mazatlan, Mexico, dated October 18th, giving brief statements of the epidemic of yellow fever in their respective consulates. At La Paz the disease was very malignant during the month of September, there being 114 deaths from yellow fever, out of 122 from all causes. The Board of Health deserted the city for the mountains, and all communication with the outside world was cut off, so that exact facts are difficult to obtain, but it is known the disease was wide-spread through that section. The yellow fever at Mazatlan had about disappeared, and clean bills of health are furnished vessels sailing from that port.

Gibraltar has modified its quarantine restrictions, and now allows vessels sailing from the Brazils to coal under certain regulations. All vessels sailing from Gibraltar are required to provide themselves with a bill of health in such form as shall from time to time be ordered by the Board of Health, and as the circumstances in each case may seem to require.

Bermuda has had new quarantine regulations "made by his Excellency the Governor," under date of October 19, 1883. The islands are divided into two districts—Eastern and Western—and a health officer is placed in control of each. The gist of the regulations is contained in the sixth section: "Any health officer visiting any vessel arriving from a proclaimed port, and finding that there is no contagious or infectious disease on board, and that there has not been any such disease on board for one calendar month previous to her arrival, and that such vessel has not during that period held communication with any vessel on board which there was any such disease, or with any port or place at which such disease prevailed, may grant her *pratique* at once if satisfied it may be granted with safety to the health of these Islands, but if not so satisfied shall place such vessel in quarantine of observation for such time as may be necessary to enable him to determine whether she shall be kept in quarantine, or may be released with safety to the health of these Islands."

Persia as a Health Resort.—Consul Benjamin, of Teheran, Persia, sends to the State Department an interesting account of the climate of Persia. He states that during the past summer that country has been healthy and free from any but sporadic cases of the plague.

As regards the climate of Persia, he writes: "It may be called, beyond question, one that is generally conducive to a high average of health. The rice-growing provinces of Mayanderan and Gilan, north of the mountains and bordering on the Caspian Sea, are full of malaria and fevers of a malignant type. The natives, however, do not seem to be affected by it, except in the matter of chills and fever.

"In the neighborhood of the Persian Gulf, the intense heat, rivalling that of India, while tempered by the trade winds, is very relaxing, although not necessarily fatal to foreigners. But for the most part the kingdom is one of remarkable salubriousness. Persia consists of an immense plateau elevated an average of four thousand feet above the sea. This is intersected by numerous lofty, rugged, and barren ranges, soaring sometimes to sixteen thousand feet above the sea level. Eternal snow exists on their summits. The vast plains are generally covered with dense verdure, and are fed by the artificial currents brought from the mountain springs. The winter is short but characterized by high winds, and in many of the northern parts by violent snow-storms. The spring and autumn are mild and delightful. The summer is indeed hot, but the nights are always tempered by cool mountain breezes. By August 20th, the cooler weather of autumn commences. At Teheran, during this summer, the thermometer has ranged from 90° to 110° F. in the shade, but the air has been excessively, and uniformly dry. In the cluster of villages, nine miles from the city and thirteen hundred feet higher, at the foot of the mountains, called the Shiniran, or Light of Persia, the mercury has ranged from 75° to 90° F. in the shade at midday, rarely going above 85°, and falling to 70° at sunset.

After once becoming acclimated by the assistance of quinine, and the exercise of common sense in general habits, Europeans find such a climate healthful and agreeable. It is evident that with only ordinary knowledge and prudence, the average length of life of the native population could be greatly increased. There is a steady, although slow growth of the population. Phthisis is exceedingly rare. Small-pox exists, but determined efforts are made to increase the advantages of vaccination. The greatest mortality is among young children, resulting from uncleanliness and carelessness in diet. Venereal diseases are widely spread and tend to perpetuate chronic and hereditary disease, especially affections of the eye. Notwithstanding this, however, the people are handsome, finely formed, and capable of great endurance. With mere regard to sanitary precautions, Persia might be regarded as one of the healthiest countries on the globe.

With the exception of the provinces above mentioned, it offers no dangers to the health of Europeans who do not indulge in dissipation, or who take ordinary care of themselves. It can be especially recommended to those afflicted with pulmonary complaints, provided they do not delay coming until the overland journey is too severe for their strength, a precaution too often disregarded by invalids as well as by their medical advisers.

Cholera in China.—It is reported that cholera has appeared in epidemic form in Pekin.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 1, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. JOHN G. ADAMS, after the reading of the minutes, read a protest against the ruling of the President at the last stated meeting on the motion to rescind the resolutions adopted by the Academy in April, 1883. The minutes as read by the Secretary were adopted with the protest. The protest, on separate motion, was laid upon the table.

DR. ADAMS, Corresponding Secretary, announced the death of Frederick D. Lente, M.D., a corresponding Fellow.

THE PRESIDENT paid a touching tribute to the memory of Drs. Lente and Charles Wright, both of whom had prepared papers, to be read before the Academy within the coming winter, having a strikingly similar title. The paper prepared by Dr. Wright was on "The Duration of Life after the Appearance of Albumen or Sugar in the Urine," and that prepared by Dr. Lente on "The Duration of Life as Affected by Climatic Influences in Consumption."

DR. T. HERRING BURCHARD then read a

MEMOIR OF THE LATE FREDERICK D. LENTE, M.D.,

which was an appropriate tribute to the untiring energy, the scholarly acquirements, the sterling integrity, and the stable friendship of the deceased.

DR. F. N. OTIS then read a paper (see p. 480) on

THE RAPID EVACUATION OF STONE FROM THE BLADDER AFTER CRUSHING, WITH PRESENTATION OF A NEW AND SIMPLIFIED EVACUATOR.

THE SECRETARY read a letter from Dr. James L. Little, whom the President had invited to participate in the discussion of the paper, but who had been unavoidably detained by professional engagements. Dr. Little referred to the great value of rapid lithotrity and his success in its performance on old men who had suffered from urinary calculus for several years.

DR. E. L. KEYES opened the discussion, and said he thought the instrument devised by Dr. Otis was an admirable piece of apparatus, although he had not had an opportunity to test its practical working.

With reference to tolerance of the bladder to instruments he thought that was most satisfactorily demonstrated by Heurteloup, Civiale, Le Roy, d'Etiolle, and others. Civiale finally reduced the time to three minutes, and Sir Henry Thompson, using Civiale's data, had made the length of time of a single sitting not more than three minutes, and had shortened the intervals between operations. Up to Clover's time the instruments devised were designed for use in atonic bladders. The use of the large tube was due to Professor Otis. But the size of the tube is not at all essential, and he did not regard it as the key-note of the advantage of rapid lithotrity. He did not regard any single thing as the essential in the operation. It was the crystallization of all the ideas in the brain of Professor Bigelow that made the operation distinct in itself. Bigelow thinks that the large tube is essential, but Dr. Keyes regarded many things as essential in order to make the operation successful. Dr. Keyes believed the operation can be performed with a No. 12 perfectly well, and was unable to see any particular advantage in using a larger tube to save a little time. The element of time has been thrown out by Professor Bigelow. According to Dr. Keyes' experience the use of a large tube had sometimes been followed by cystitis, and in cases in which cystitis did not follow the use of a smaller tube.

He thought it best not unnecessarily to distend the urethra. He took the point of second constriction of the urethra, about two and one-half inches from the meatus, as a guide for the size of the tube. One which will go easily through this portion of the urethra he regarded as the more appropriate size.

He was charmed with the efficiency and simplicity of the design of the apparatus exhibited by Dr. Otis, and should use it when the next opportunity presented itself. The instrument he used entirely was that with a strainer, and he had not been obliged to change the strainer during the operation. He thought it possible that the quantity of air which Dr. Otis' apparatus contained might be an objection, and suggested that if it could be used upside down the air in the tube could be gotten rid of.

DR. OTIS—It can be used in that way, and indeed it is the way in which I usually use it.

DR. KEYES then described Thompson's manner of using his instrument, and also his own method. Bigelow, Otis, and Reginald Harrison, of Liverpool, he thought were the only operators who used a large tube. If the tube is introduced into the bladder at once, of course a quantity of air may be carried in, and to avoid this he carries it down into the prostatic urethra only, then makes gentle pressure upon the bulb, which forces the air out, and, while this pressure is maintained, pushes the tube on into the bladder. As it enters the resistance offered at the end of the tube is quickly removed, the pressure causes the bulb to collapse completely and send a full stream of water into the bladder. Then make *short* washings; that is, squeeze the bulb lightly, and not give it a full grasp, which completely empties it. The bulb of Dr. Otis' instrument was small, and perhaps it would prove to be one of its greatest advantages.

It sometimes occurs that water escapes by the side of the tube, and as Dr. Otis' instrument then stood it might be that it did not contain sufficient water, and for replenishing could not be so well managed as Bigelow's. However, these objections could be very readily overcome, and doubtless had been anticipated already. But for cheapness, portability, transparency, and simplicity it excelled any which had yet been devised. Whether or not fine phosphatic dust would be thrown back again he could not say; but after all, if it was, it would not make any special difference as it readily passes out with the urine.

DR. OTIS thought that Sir Henry Thompson might be regarded as one who uses a large tube, because he employs as high as 28 or 30, certainly as large as the average of what he had just recommended. He agreed with Dr. Keyes concerning the disturbances liable to be set up by using a large tube in cases in which the prostate is enlarged; but, at the same time, he was unable to see why we should not have the advantage of the full size of the normal urethra when the prostate is not diseased. He believed division of the meatus was important in a majority of cases, and it should be performed beforehand, for the reason already given and for another, namely—that many of the irritations which have previously existed, and which simulate stone in the bladder, pass away after division of the orifice of the urethra.

With reference to the size of the bulb, he thought the smaller one desirable for the sake of portability, and besides it was least liable to get broken. Dr. Otis then demonstrated how the evacuator could be manipulated so as to meet the suggestions made by Dr. Keyes.

THE PRESIDENT then declared Drs. R. W. Taylor, C. H. Judson, R. W. Amidon, M. Josiah Roberts, and L. Emmet Holt elected as resident Fellows, after which the Academy adjourned.

THE MEMBERS OF THE PASTEUR MISSION TO EGYPT have returned.

Correspondence.

OUR LONDON LETTER.

(From our own Correspondent.)

OPENING OF THE WINTER SESSION AT THE LONDON HOSPITALS—RELATION OF MEDICINE AND OF SCIENCE TO RELIGION—TONE OF THE INTRODUCTORIES—STATEMENTS ON RELIGION BY PROFESSOR ACLAND, DR. HANDFIELD JONES, F.R.S., MR. LE GROS CLARK, AND MR. GOULD—PROFESSOR FLOWER AND MR. CLARK AT THE CHURCH CONGRESS.

LONDON, October 16, 1883.

THE new session has opened with, perhaps, unusual success. The dissecting rooms are well supplied with subjects, and the schools are—at least the majority are—rejoicing over full entries. The opening day was this year remarkable for the tone of the introductory lectures. It has long been the custom at each school to open with an introductory lecture, professedly addressed to the freshmen, but inasmuch as the occasion brought together a large number of former students at the school, it was generally seized to speak to them also, and therefore the lecture was looked forward to as the event of the *annus medicus*.

A few years ago the daily papers began to report these annual lectures, and to this is perhaps partly due the fact that they have taken a wider and wider range of interest and importance. The public regards them as the exposition of medical opinion for the time being, so that if the lecturers were some year to meet beforehand and all agree to demand some right or the redress of some grievance, their united voice would perhaps be regarded as necessitating the change. At present variety characterizes the lectures, all subjects being deemed to come within their cognizance, on the principle, I suppose, of *nihil humani alienum puto*.

This year the introductories are remarkable from the fact that several lecturers have ventured to touch on the topic of religion, and show that true science is not in opposition. Considering the bold assertions which materialists have of late years made, it is refreshing to hear the other side from men of high standing in our profession. At King's College this seemed natural enough, as it was founded as a defence of orthodox views, to be carried on as a Church of England institution in contradistinction to unsectarian colleges.

Professor Acland, of Oxford, came up to deliver this lecture, and as he is President of the Medical Council, this official position, as well as his own learning and influence, would lend weight to his utterances. Admitting that the arguments of materialists were intricate as well as voluminous, and that often in the past the faith of religionists had rested on ignorance or superstition, he held that the progress of science had not in the least shaken religion, and pronounced the controversies respecting the relations between the two as the most fruitless of all except possibly purely metaphysical speculations. There spoke the physicist, will no doubt cry the philosophers. Dr. Acland quoted a beautiful passage from Dr. Latham (whom he pronounced one of the greatest clinical teachers this metropolis ever saw) to show the spirit in which students should master their work and stand related to their fellow-men. Latham said that when humanity warms the skill of the consummate practitioner, the interest, excitement, and intellectual pleasure of helping the sick, is "exalted into a principle and invested with a moral motive, and passes into the heart." Then asking, "What if religion should animate it?" he answered, "Why, then, happy indeed is that man whose mind, whose moral nature, and whose spiritual being are all harmoniously engaged in the daily business of his life; with whom the same act has become his own happiness, a dispensation of mercy to his fellow-creatures, and a worship of God."

Reminding his hearers that as Latham spoke, so he lived, and so he died, Dr. Acland proceeded to urge that too often, unhappily for mankind, the human element is permitted to overshadow the divine and the form allowed to seem more important than the substance. And yet, he said, the "essentials of spiritual life are simple enough. They may be and are hard to teach and hard to attain. They are taught chiefly by example, which implies individual attainment. They are acquired by practice, which means individual self-sacrifice." Then making his climax in Greek, as well became the Oxford professor, but might be, to a large extent, lost on a modern medical audience, he added: "They are summed up in those weighty words, *μετάνοια, πίστις, ἀγάπη*. These gifts, we are told, are not self originated—having life, they are born of other life, *ὁ καρπὸς τοῦ πνεύματος*." Then he said any education which has not brought before the student considerations of this spiritual life has been faulty and inadequate for him. "Any scheme of the universe condemns itself which leaves out of sight all that can be learnt of the character of a Heavenly Father from the study of the moral nature of man."

Dr. Acland was not alone—not even perhaps the most outspoken in raising the standard of orthodoxy which has this year been waved triumphantly at several of these introductory lectures. Thus, at St. Mary's Hospital, the veteran senior physician, Dr. Handfield Jones, F.R.S., devoted a considerable portion of his lecture to warning the students against prevalent forms of skepticism, and showing the evidences which he thought sufficient to establish the truth of Christianity and the historical truth of its great central miracle—the resurrection of Jesus Christ.

Again, at St. Thomas' Hospital, another venerable F.R.S., Mr. Le Gros Clark, delivered similar testimony to his confidence in a causative, intelligent law-giver, "beneficent and omnipotent, 'too wise to err, too good to be unkind.'"

To these examples I may add that one of the later generation—one of the young surgeons who may be regarded as a rising man, also gave no uncertain sound; for having dwelt at length on Nature, he commends her to the diligent study and to the imitation of his hearers, adding as a conclusion: "You will find that however secret her plans may be, when they are discovered and brought to light, they are such as only to excite our admiration as worthy of a God. Imitate her in this, too, and the pure in heart shall see God."

Many other topics were touched upon by the several lecturers, but the one I have considered has perhaps excited the most remark, as indeed it could not fail to do, as its interest is wider, deeper, larger altogether, affecting in fact all the race of mankind.

The lecture at the London Hospital was this year postponed to the 9th instant. Professor Huxley was the lecturer, and it was thought by some that, having thus nine days' notice, so to say, of the drift of medical opinion, he might attempt something in the nature of reply, or, at any rate, what might be so construed. Those who went in the hope of such a polemical display were, however, disappointed, for he used the opportunity to state his views on medical reform—and clear views he has on the subject, and you may be sure they were clearly stated, and the statement will serve to keep medical questions before the public.

As a pendant to what I have reported, I may mention another fact illustrating the present aspect of science toward religion. At the Church Congress which has just been held, Professor Flower, of the College of Surgeons, and Mr. Le Gros Clark gave the assembled clergy an account of the most recent scientific investigations and their bearing on questions of faith. They were listened to with much interest and their statements widely reported. Surely after this, and the stand made at the introductories, we shall hear no more the assertion that has often been rashly made, that the profession sympathizes with skepticism.

THE TREATMENT OF SCIENCE BY THE MILITARY METHOD.

To the Editor of The Medical Record.

Sir: In The Medical Record of September 29th—prompted, confessedly, by Dr. Shufeldt's article on "The U. S. Medical Service," in the same journal under date of August 25th—Prof. Elliott Coues lets "drive" at the "Great Confederacy of Dunces," rather briskly, and with rifled guns.

We suspect something of the sort all along, but for fear of mistake we are told so in just so many words at the end. From the start the "great Confederacy" gets its share of the cannonading, but throughout it is the "second examination" that makes the thunders of the biggest guns. There is no denying the fact, the second examination gets well pounded.

Doubtless believing that he, like Dr. Shufeldt, has a "good case" and a "working vein"—however the two go together—Prof. Coues sets himself the task of showing that the "examination business" is "dangerous," "dubious," "futile," "superfluous," and "occasionally amusing." Whatever others may see, I, for one, fail to perceive the showing. I am unable to catch even the amusing feature. The picture which Prof. Coues draws of his experience at the "second examination" does not appear to me the least bit amusing, but it does appear to be saturated with "an audacious candor," eclipsing that of Dr. Shufeldt as the streaming radiance of the full moon does the feeble light of the glow-worm. Anyway, we know now just how *he* was examined. Knowing it, and assuming that the members of the Army Board are gentlemen favoring even-handed justice, should we believe that Prof. Coues' examination is a sample of second examinations generally? Such can hardly be possible. If so, who would mind them? Where would be the danger of hurting, of wounding the spirit of those delicate ones "worth the rest of the regiment?" Why, the super-sensitive soul of the fragile Keats could have stood the ordeal easily. Had Lord Brougham's criticism of the "Hours of Idleness" been as light, we would never have had the "English Bards and Scotch Reviewers." Had Dr. Shufeldt been assured of the same sort of an examination, it is reasonable to presume that he would not have indulged in so much of that anxiety which he quite graphically depicts. That he got cast the first time proves the difference.

Basing our inference on Prof. Coues' statements, it is found that the Army Board conducts examinations with varying degrees of rigidity—what the professor would call applying the rules best adapted to individuals. I say this because in one case a medical officer of "enviable reputation, respected by his associates, and faithful in the discharge of his medical and military duties," is "thrown" at an examination admitted to be "fair and just"; while another, with neither "fancy nor ambition for medicine," with his "head full of other things," who "cut off legs, made reports, obeyed orders, always in an automatic and perfunctory way," who "does not expect to be thrown," goes forward and is not thrown. Why, do you ask? The reason is supplied: "The examination was a nullity in my case, *and properly so.*" Yet, strange to say, the subject of this examination tells us that "the report was wisely, justly, and courteously based on what I was." Granting the truth of this for argument's sake, one naturally wishes to know why that other officer, who was "wounded where he lived, in his very marrow," was not given the benefit of a little examinative "nullity," instead of throwing him by means confessedly so fair that they left him "not even the vantage-ground of complaint."

Prof. Coues tells us that in his own case no "forbearance" was shown; that the case "was simply decided on its merits." Admitting this, as one of the "brave boys" I beg leave to say that if no forbearance was shown in his case, then great injustice was shown in the other, and the injustice lay not with the examination as a system, but with the members of the board.

Let me hurry up to add, however, that there isn't one of us dunces that believes the members of the Army Medical Board capable of inflicting an intentional injustice upon any member of the medical profession. Furthermore, speaking for one, I believe the members of the board *can* find out things "about a candidate that everybody did not know before, excepting his ability to pass an examination under every possible disadvantage." Referring *solely* to medical attainments, and taking Professor Coues' estimate of his own as absolute evidence, I believe everybody in Duncedom—and out of it—will concur that the board in finding him "qualified for promotion was either dazzled by his acquirements as a naturalist, or found it out, as he says, by "rising superior to it." If so, why did not the board apply the "scientific method" in the other cases and "rise superior" to them also? Dr. Shufeldt would probably have been willing—that is, if the thing was to be general, for I do not think he is the kind of man to ask for exceptional treatment.

In sober truth, Professor Coues makes a not altogether flattering showing for the Examining Board of the Army Medical Corps. To be sure, he lays it all on the "system;" but the evidence abstracted from his own statements shows that the board does not always follow the same system; and that, may be, is where the shoe pinches. Sometimes, according to him, the candidate "kicks the system out of court," and sometimes, both board and candidate get rid of the system by "rising superior to it;" and this, in special cases, is termed the "correct," that is, the "scientific method." Now, even a dunce can see that the doing of this requires "discrimination"—just what the board is claimed to have had in Professor Coues' case—and the exercise of discrimination presupposes both discriminative capacity and freedom of action. There isn't, then, so much the matter with the "system" after all, since one of the "correct" methods of applying it is to "kick it out of court."

The power to do this is vested in the board. If the board can do it once, it can do it as often as necessary. Then why not do it every time a good man comes up? Dr. Shufeldt is a good man—that I know personally—he is likewise a scientist of considerable attainments. Why not have given him a "nullity," too, especially as this would have been the "scientific method" as applied to men of his kind?

When boards work under a system which permits them the discrimination of rising superior to it, if needs be, one must expect the "Great Confederacy" to rise to a man and ask, why the medical officer that was "wounded where he lived, in his very marrow," is pronounced the victim of a "cast-iron system, too hard and military to be applicable to the requirements of his case?"

The second examination system may be cast-iron, but as long as it can be treated as a "nullity," can be "kicked out of court, be risen superior to"—while such convenient alternatives are usable what difference does its hardness make? One might add, however, that the alternatives just referred to, although "scientific," and therefore unmilitary, suggest, as applied to the "system," not so much cast-iron as elasticity.

In regard to examinations, everybody admits that there are many bad ones. Are there not also some good ones? It is possible to fluster a highly sensitive nature under "strain and stress," and it is possible to so shape questions as to cause the rejection of perfectly competent candidates. But do boards set out to do this? I think not. Let us suppose a candidate before the board—one of the highly sensitive sort. Let us suppose *him* like one of those described by Professor Coues. "Hundreds of his brother officers," "a thousand soldiers" know him by his work. "Not a clerk in the Surgeon-General's office but knows how that officer stands." Examining boards are supposed to be composed of men of intelligence and information. Army boards certainly are.

What, then, hinders the board from knowing what soldiers and clerks know so well? Go to! it does know.

But even if it do not, and refusing to avail itself of any of the alternatives referred to above, why can it not truly find out a candidate's qualification for promotion and report accordingly, instead of turning him adrift to be consumed by his Greek fire? This cannot always be done in an hour, nor in two hours, but it can be done, nevertheless. Presumptively, the board's object is to get at the facts; the board has been shown to have considerable discriminative power, backed by three powerful alternatives, defying all the cast-iron in any system; is it not fair, then, to suppose that it can take as much time as it chooses? Speaking for one dunce, I believe the language of the board toward such a candidate would be substantially this: "Doctor, hundreds of your brother officers know you, a thousand soldiers know you, the clerks in the Surgeon-General's office know you, and this board thinks it knows you as well as they. We propose fair-dealing. Professor Coues says you know your proficiencies and deficiencies better than we can find out. He says, moreover, that if called to give an account of yourself you will *do it*, fairly and squarely. You are now called to that account; give it fairly and squarely, and you will be treated according to your deserts." This may be cast-iron, but it savors so much of fair play that if the candidate flunked under it, it would be just as well to let him go and fight it out with his Greek fire.

It is not entirely irrelevant to ask, if the second examination is superfluous, why also is not the first? Professor Coues asserts: "Depend upon it, no board is going to find out anything about a candidate that everybody did not know before." Everybody, includes, of course, the faculty of his *alma mater*, supposing his *alma mater* to be one of the real nice, hard school, under whose eye he has been for twenty months, or more, and from whom he has finally obtained credentials of fitness. There is a chance here to chop some logic about competitive examination and survival of the fittest, before the first board, but the same will apply quite as well to the second.

It may be peculiar to a "brave boy" to believe that an examination conducted by a board seriously in quest of the true standing of a candidate is a fair test of fitness, if so, the "brave boy" need not be ashamed of it. It was an Oxford professor, I think, who said that the man who stands up pluckiest under a long and searching examination is the one surest to leave his mark behind him. Rough handling used up Keats, but it invigorated Byron and Webster.

Professor Coues tells us that on his theory Dr. Shufeldt does not belong to the army. "On the contrary, the army belongs to him, and nothing the army can give him is too good for him." That "he never ought to know a 'commanding officer,' nor hear sick-call blow, nor see a patient, nor wear a sword." What I make out of this—dunces are liable to err—is that Dr. Shufeldt, on account of the "spark," having special aptitude for scientific work, and the requisite qualifications to become a great naturalist, should be given "the necessary conditions of environment, and have the rules adapted to the individual." It may be this would foster the scientific spirit and encourage the pursuit of science; but it seems to me it would turn out awkwardly, unless the army is ready for two sets of officers, one to attend to duties, the other to cultivate science. If the medical corps of the army is ready to have placed on its roster certain names whose owners are to follow scientific pursuits exclusively, for the glory and benefit of the army, and the rest of the world, well and good. But add this feature, and eliminate the second examination, and it is likely the scientific side of the medical corps will outgrow the other. Nay, it is fair to say, that those "bad rats," a few of which Professor Coues insists are still to be found in the corps, would cover up many absences from sick-call and much ignorance of commanding officers with the engrossing exactions of ornithology and the like, and not be any too well supplied with the "inner light" either.

So far as I know, there is no branch of the Government that makes a double provision. As Prof. Coues says, "So long as any man is voluntarily a member of an organization, civil or military, certain regulations and restrictions must be enforced in his case; but the greatest good to the greatest member is likely to come when rules are best adapted to the individual." The first half of this declaration is absolutely true; the other depends upon the character of the organization, and the issues involved. To every compact there are two parties. When a medical man enters the medical corps of the army, he makes a compact with the Government to perform certain duties for a *quid pro quo*. This compact has the same stipulations in each case. One cannot enter and say, "I am the graduate of a medical school, but I have the bent of a naturalist, I shall not go to sick-call." The Army Medical Corps is justly entitled to be proud of the rigor of its initial examination; where is the use in the cases of those intending to be naturalists?

Seriously, though, a compact made should be a compact kept; and Dr. Shufeldt is the sort of man to keep his. I don't believe he would hold his position with the exemptions previously enumerated. I may mistake, but I believe that he is willing to subscribe to the following creed, which I am "brave boy" enough to express openly before any audience, to wit: I believe that the man who writes himself "doctor of medicine" owes his first allegiance to medicine. That it is the bounden duty of the physician to prevent disease, and heal the sick to the utmost of his ability. I believe that the responsibilities resting upon him are so weighty that they leave him little time for other pursuits. I believe that medicine, being concerned with human life, cannot be consistently carried on as a "side show" to any other calling; that medical science is so profound, so wide-reaching, so engrossing, that it demands with tyrannous exactitude all the working hours of the most gifted of its followers. I believe, furthermore, that the soldier—the poor devil who seems to have been forgotten by all parties up to this time—who is, as Shylock says, "fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed and cooled by the same summer and winter as a Christian is," has the inalienable right to the best knowledge which his medical adviser is capable of acquiring. I believe, too, that he has the imprescriptible right to demand that the surgeon who cuts off his leg shall do it not in an "automatic or perfunctory way"—not "with his head full of other things"—but instead, full of medicine and surgery, in which should be felt at all times a "vivid, resistless, and irrepressible interest."

Finally, whether anyone else subscribes to this creed, which may possibly be fortified by a "halter" and a "club," all the same it is *true*, and therefore not likely to be very unscientific.

JOHN GODFREY, M.D.

NEW ORLEANS, LA.

TRANSFUSION OF BLOOD AND INTRAVENOUS INJECTIONS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In your issue for October 20th, an editorial gives a *résumé* of the transfusion of blood and intravenous injections of saline solutions. Very favorable reports as to the value of the latter procedure in post-partum hemorrhage are there given. The only method spoken of is that used by Heyden and described in the following words: "A glass funnel was used connected with a simple gutta-percha tube, ending in a metallic canula, which was made to penetrate the median vein, in which it was tied." This method and apparatus seems so very simple and easy of application that many physicians may try it in suitable cases.

For this reason I wish to record a failure of this

method in my hands and some precautions that may be used to prevent failure in the future.

In August of the present year Mrs. M——, a multipara, was taken in labor at 7 A.M., and at 12.30 M. was delivered, without assistance, of a dead-born child. The child had been dead, I judged, some twenty-four hours. In attempting to deliver the placenta I found it adherent throughout nearly its whole extent. Fearing post-partum hemorrhage I procured hot water, tincture of iodine, and a Davidson's syringe, and then, as there was some flowing already present, I proceeded to detach the placenta.

During this procedure some hemorrhage took place, but was speedily controlled by the iodine injections. My patient, however, was extremely blanched and prostrated. Every effort was made to get up reaction, but at the end of an hour she was evidently growing weaker. Assisted by Dr. Ashmead, I then attempted the injection of a saline solution. We attached a piece of rubber tubing two feet in length to a funnel; in the other end of the rubber tube inserted a piece of glass tubing about the calibre of the median vein. Binding the arm at the elbow I cut down upon the median vein and passed two ligatures around it about one inch apart. The one nearest the hand was tied tightly. The vein was then raised, an incision was made into it, the canula inserted while the saline solution was flowing, and the canula tied in the vein. The operation was not at all difficult and I can see no reason why the operation may not be done by the general practitioner whenever it is indicated. Much to my surprise, however, the solution did not enter the circulation and my patient did not rally. Every effort was made to force the fluid into the veins but without avail. By means of artificial respiration the patient's life was prolonged for about one hour, but with the means at our command none of the saline solution could be made to enter the veins.

The cause of the failure in this case I can only attribute to the absence in the apparatus of any means of giving a forcible injection. Had my rubber tube been six feet long instead of two, thus giving a pressure at the point of delivery of 2.7 pounds to the inch, the liquid might perhaps have entered the vein. Still better would have been a rubber tube with a simple bulb in its course by means of which pressure could be made on the column of fluid by compressing the bulb with the hand. Profiting by the failure in the past, I should make the following suggestions as to the operation for intravenous injections of saline solutions:

First.—A glass reservoir with a cubic capacity of one pint at least. The ordinary glass funnel is the most convenient reservoir that can usually be obtained.

Second.—A rubber tube of two or three feet in length, with a valveless bulb somewhere in its course. The bulb should be without valves because there will be less liability of entangling bubbles of air or foreign particles in the tube. The tube should be large in order that bubbles of air may readily rise through the liquid in the tube. If the calibre of the tube be small air may be forced down in front of the column of liquid into the circulation, instead of rising as it would do in a larger tube.

Third.—The canula should be of glass so that air might not be carried through it unobserved; it should be bent upon itself slightly to facilitate its introduction into the vein; and its delivery-point should of course be of about the size of the calibre of the median vein. This glass canula should be larger above than at its point of delivery, in order that bubbles of air that may enter at its point will rise upward easily.

An apparatus so simple and so inexpensive will be all that is necessary to do a successful transfusion with the saline solution. The cost of such an apparatus is not above a dollar and a half.

Without attention to these details in preparing the apparatus the operation will fail in a certain proportion of cases.

W. E. FOREST, M.D.

NEW YORK CITY, Oct. 26, 1883.

CAN MEASLES OCCUR FIVE TIMES IN THE SAME PATIENT WITHIN THREE MONTHS?

TO THE EDITOR OF THE THE MEDICAL RECORD.

SIR: The report of the visiting physicians to the Board of Managers of the New York Infant Asylum, as it appeared in THE RECORD last week, one could hardly believe was intended for publication. But, since it has been published, and is endorsed by men of well-known medical reputation, it renders it simply a matter of duty for some one to question such apparently unheard-of statements, namely, that in an epidemic of measles of less than ten weeks' duration about sixty per cent. of the cases were afflicted twice, nearly twenty per cent. three times, and one individual five times. I would simply ask the question, "Can this be possible?" I have carefully looked over well-known authors without finding an intimation that any one ever reported an individual suffering five separate attacks of measles. Ziemssen, after repeating the report made by Dyrsen, Bierbaum, Spies, and Home, of a child who had suffered measles three times within three months, says, "These cases, however, do not preclude the possibility of deception." He further states, "against the frequent and even customary recurrence of measles, especially espoused in recent times by Trojanowsky, we possess the strongest evidence of good authority. I mention only the names of Berndt, Thuissink, Schönlein, Mayr, also Schott and Bortscher, with whose experience my own thoroughly coincides." Even Panam, from his immense number of observations upon people of every age, has not been able to report a single case of a second attack of measles. The experience of Rosenstein testifies "that he has for forty-four years, and Willan that he has for more than twenty years devoted the closest attention to eruptive diseases, without meeting with any one who had had for the second time measles accompanied with fever." This is strong testimony even against second attacks. But if we admit that other major exanthemata can attack an individual a second time, we must admit the same of measles. That a second attack of measles is possible but rare is testified by Gregory, Eberle, Dewees, Squire, Ringer, Bartholow, Hartshorne, Niemeyer, Meigs, and Pepper. We all know how easily an error can and will be copied; when it is indorsed by fourteen respectable physicians it is time we found out whether or no it is an error.

While intending in this communication to call attention to and bring out some testimony respecting the recurrence of measles, I take the opportunity to protest against a statement in the report under consideration, which I think the signers will, on reflection, confess to be unfair, the statement, namely, which they have italicised, "No case of scarlet fever has occurred in the institution." On October 4th, a child died, and Drs. Campbell and Carlyle, by order of the coroner, made an autopsy. They reported that the child had died from scarlet fever and diphtheria. This was the first case of diphtheria discovered in the institution, and there is no doubt whatever it had existed for some time previous. Now the gentlemen who make the statement that no scarlet fever has occurred in the institution had not sufficient opportunity to decide whether or not the case cited was or was not that disease. The child, as above stated, died October 4th; Dr. Warner's daily service commenced October 3d; Dr. Fowler's, October 5th; and Dr. Bradley's on October 10th. I ask these gentlemen, seriously, if it is fair in them to dispute *on hearsay* the opinion of two reputable physicians.

During the Infant Asylum troubles some efforts have been made to create dissension among the doctors; equally with any member of the medical profession I deplore the calamity that has befallen the Asylum; but let us, as medical men, discover what scientific facts there are and leave the fighting to others. Respectfully,

E. F. BRUSH, M.D.

MOUNT VERNON, November 6, 1883.

To the Editor of The Medical Record.

Sir: At the annual meeting of the Board of Managers of the New York Infant Asylum, held in January last, the President, Mr. Clark Bell, was authorized to reorganize the medical department. In the discharge of this delegated authority, Mr. Clark Bell offered places upon the medical staff to Drs. Alonzo Clark, T. Gaillard Thomas, Fordyce Barker, Lewis A. Sayre, Wm. T. Lusk, Wm. M. Polk, Wm. M. Chamberlain, Allan McL. Hamilton, Fred. A. Sturgis, Andrew H. Smith, George F. Shrady, Clinton Wagner, Charles S. Ward, Lewis H. Sayre, Ed. L. Partridge, Cyrus Edson, Thomas E. Satterthwaite, G. M. Hammond, J. W. Wright, Benj. F. Dawson.

All of these gentlemen declined to accept the positions offered them, or, having accepted them, resigned, when they learned of the action taken by the Board of Managers in reference to the former medical committee.

Since the completion of the reorganization of the medical department by Mr. Clark Bell, the following named members of the staff have resigned, viz., Drs. George M. Lefferts, J. H. Ripley, George S. Conant, Paul F. Mundé, Wm. H. Welch.

Since July 1st, the Mount Vernon branch of the asylum has filed 82 death certificates of children with the proper town authorities. The number of children has thereby been reduced from 225 to 143, and the income of the asylum has been diminished by about $18,000.

The scientific work of the medical staff (as distinguished from its practical work), so far as it has come to my knowledge, is comprised in the original and marvellous contribution upon the subject of measles contained in the report upon the "Epidemics at the New York Infant Asylum," etc., published in your issue for November 3d.

I quote from this report, as follows: "Number of individuals who had measles, 203; of these 124 had measles twice, 248 cases; 34 had measles thrice, 102 cases; 1 five times, 5 cases."

To appreciate fully the scientific value of these statistics, one must bear in mind the following facts, which are found in the report: "The measles appeared early in August." The report was made up on "October 25th." Consequently, all of the above-cited cases of measles and the recurrences must have taken place within a period of three months. But, who vouches for the correctness of these hitherto unheard-of observations? I search the report in vain for an answer. The four physicians who sign the report state that their duties were begun upon September 29th, October 3d, 5th, and 10th, *i.e.*, during the ninth and tenth weeks of the prevalence of the epidemic, and within three weeks of the date at which the report ends. Surely, these gentlemen do not mean to have us believe that all of these cases of measles occurred under their observation during these three weeks? On the other hand, if any of them were observed before September 29th, what right have these gentlemen to publish this as a portion of their "experience?". Why does not that portion of the medical board on duty from "early in August" to "September 29th," make public its statistics?

I trust that the full details of this epidemic, which doubtless will become historic, may be given to the profession. Yours, etc.,

Henry D. Nicoll, M.D.

7 West Thirty-ninth Street, November 6, 1883.

To the Editor of The Medical Record.

Sir: In our communications to the medical press concerning affairs in the New York Infant Asylum, we have directed our attention mainly to what we considered as great mismanagement on the part of the president. Our action concerned physicians generally, and all managing boards of charitable institutions, and we did not wish that it should be diverted from the main issue by professional scuffles, in the excitement of which attention should be drawn from the main cause of the disturbance.

But in the interests of literary and medical exactness, we are obliged to notice the communication in your issue of November 3d, regarding "The Epidemic at the New York Infant Asylum and the Report of the Medical Board."

The report is so general in its terms that we do not feel quite sure whether the "certain partial statements in the medical press" refer to what we have written; yet we think we may assume this to be the case, since our communications concerning the Asylum have, from the nature of the circumstances, been prominent. We can say without hesitation that we have facts and figures behind all statements made, as well as more facts and more figures to be used if the occasion requires.

The physicians who sign the report of "The Epidemics" give what they term a tabular statement of *our* experience with measles. Yet if we examine the text we shall see that most important medical events are subscribed to by physicians who have seen little of them, and the report is approved by other physicians who have seen less.

Reports from hospitals and public medical institutions are supposed to furnish valuable medical experience for general professional use. It is expected that such experience will have been the fruit of close and careful observation, and go to make up material for reference and medical history. But Dr. Fowler has only been making daily visits since October 5th, Dr. Bradley since October 10th, and Dr. Warner, who was appointed about September 25th, has been making daily visits only since October 3d. The report, however, refers to cases of measles which occurred from the first of August to the last of September, before these gentlemen had commenced their visits. How can the tables then be designated as "*our* experience with that disease." Would they themselves receive such testimony concerning any debateable incidents of disease? As to our proceedings at Mount Vernon, since they are mentioned in the report, we would refer to the *New York Medical Journal* of October 27th for further particulars. We were not members of the medical board, and when we offered our services the epidemic was under full headway.

It was stated that there were 203 cases of measles from August 1st to October 25th, the date of the report; 124 patients had measles twice, 34 had it once, and one patient had measles five times. These are statements of unusual interest, and naturally lead to an examination of the literature concerning recurring attacks of rubeola. Such recurrence has greatly interested those who have studied contagious diseases. Says Dr. Louis Thomas, Professor of the Polyclinic in Leipzig ("Ziemmsen," vol. ii., p. 42): "Second attacks of measles are, according to the experience of most observers, exceedingly rare, as much so as second attacks of variola, scarlet fever, varicilla, etc." Nor can we regard as incontestable all the cases of second attacks which are recorded. Against the frequent and even customary recurrence of measles, especially espoused in recent times by Trojanowsky, we possess the strongest evidence of good authorities. I mention only the names of Berndt, Thuessink, Schönlein, Mayr, also Schott and Bortscher, with whose experience my own thoroughly coincides. Even Panum, from his immense number of observations upon people of every age, has not been able to report a single case of a second attack of measles. The experienced Rosenstein testifies that he has for forty-four years, and Willan, that he has for more than twenty years, directed the closest attention to eruptive diseases without ever meeting with any one who had had for the second time measles accompanied by fever. Dr. Eberle witnessed but one unequivocal example, Rayen mentions three instances, Dr. Hare one, Dr. Condie several, Dr. Downs is doubtful, except where the first attack may have been the rubeola *sine catarrho*, and Guersent and Blache have seen infants with measles twice in the same year. Further

on Louis gives the names of a number of those who believe in a second attack, and basing his further remarks upon this, says that cases of a second attack may be divided into such as appear a long time after the first attack—that is, at least a quarter or half a year, or generally much later, even from twelve to eighteen years afterward—and into such as occur as early as even a few days after the first attack, or, at most, from three to four weeks afterward." He then gives the names of various authors who report such cases. "Here, if the diagnosis was correct, there is no doubt of a second infection. On the other hand, a subsequent infection in cases of the second sort is less certain, they should rather be regarded as mere relapses, and be estimated in the same way as the well-known relapses of typhoid fever."

As is evident, the recurrence of measles even once is considered doubtful by many, and we may therefore well apply the words of Mr. Clark Bell, which he used concerning the healthfulness of the Mount Vernon Home in 1882, to the one patient who had measles five times in less than three months, and say that it is "really phenomenal as compared with other institutions." It would seem most accurate to place this case in the second class of Louis.

The report says: "While there appears to be several sources from which the diseases were introduced to the Asylum, there is no certainty respecting any of them. Until the present time the New York Infant Asylum has been remarkably free from contagious diseases, and they have not spread. In 1882 there was one case of diphtheria and one of rötheln. In 1881 there were two cases of diphtheria. In 1880 there was one case of diphtheria. At the Sixty-first Street home, in the same year, there were two cases of diphtheria in January, which were quarantined and promptly recovered. It is said there were also a few cases of variola."

In 1879 whooping-cough had extended in the town of Mount Vernon, where it had been epidemic about a year. It appeared in an epidemic form in the asylum, and about twenty-five cases of variola also showed themselves there in the same year. We have had scarlet fever and diphtheria at different periods in the different branches of our institution, but they have not prevailed. We have attributed this in a considerable degree to the immediate isolation of even doubtful cases.

Our search for the cause of the recent epidemic led to the following facts, which seemed sufficiently to account for its origin:

Maggie ——, a child from Sixty-first Street branch of the asylum, aged one year, ten months, and two days, entered Mount Vernon July 30th in the afternoon. This child was in the first pavilion on the front side of the main building. On August 1st an eruption appeared on the child; it had a temperature of 105°. The child was examined and returned to the ward, where it remained until the next morning, when it was placed in a small room at the rear of the same building, immediately adjoining the sewing-room. This child had diarrhœa, coryza, conjunctival congestion, and bronchitis. On the 11th of August Mamie ——, aged two years and six months, in the same end of the ward, had coryza, bronchitis, entero-colitis, and a temperature of 105° to 106°. She was sick in the same ward for twenty-four hours, and then transferred to the infirmary. Emma S—— was the third case, and was sent to quarantine August 15th, from the same ward, after which the epidemic began to spread more rapidly.

The report states that the average mortality from measles, according to the best authority, is twelve per cent. In these statistics of measles, based on the mortality among a large number of cases, the inference is evident that those cases of measles are included in which death results from some of the complications which not infrequently attend the disease. There were 203 individuals who had measles at the Home, and of these 48 died—6 died of diphtheria when convalescing from measles. Forty-eight deaths would give a mortality of 23.05 per cent.; but the mortality of measles depends so much upon hygienic conditions and treatment that it is necessary to compare epidemics which occur under similar circumstances to decide whether the mortality be large or small. If by an average mortality is meant the figures obtained by adding the mortality occurring among a given number of cases, part of which were in a crowded hospital and part in isolated dwellings, and drawing deductions from these, it is evident that any conclusions from such a source would be almost useless. Some statistics concerning the mortality of measles might be given as found in books, but all physicians know that they do not expect to lose their cases of measles when the surroundings are of the most desirable character, whereas in "hospitals and barracks, in a word, in too crowded localities, the prognosis of measles is less favorable." "The mortality of measles in general is as a rule slight." Taber instances the epidemic at Schorndorff in 1827–1828, and places the mortality at 1.8 per cent. in 2,100 cases; Gaissler 2.1 per cent.; others at 4.5 per cent., 2.4 per cent., and in the restricted accommodation of the Children's Hospital at Stockholm of 131 cases 36 per cent. died.

The Home at Mount Vernon is finely situated on an elevated ridge which slopes east and west, depressing southward. It has a subsoil of gravel and has natural drainage into a running brook. There is a large main building, an old building near, and five cottages, besides a "Sanitarium." It was not a hospital until made so by the epidemic. Whether the mortality was large or not under these circumstances we leave to further investigation; the fact still remains that the true method of managing epidemics is, if possible, to prevent their development.

We have only considered a few points in the report on "The Epidemics at the New York Infant Asylum," and we cannot intrude too much upon the space of THE RECORD. We believe it is in the interest of physicians to consider whether the questions now pending concerning the New York Infant Asylum do not interest them closely, particularly those who are connected with charitable institutions.

JOEL FOSTER, M.D.,
WILLIAM N. BLAKEMAN, M.D.,
FRED. A. BURRALL, M.D.,
E. A. GOODRIDGE, M.D.

WHY MUST DISTINGUISHED MEN ACCEPT SMALL FEES?

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: In a letter to THE RECORD for October 20th, Dr. E. C. Wendt has criticised the status of the medical profession of Chicago in such a way as to suggest that he is a close observer, for, to our shame be it said, the doctor has struck the key-note of the chief obstacle to professional advancement in this city. There are men of the highest eminence in this city who are in the habit of charging the nominal fee of a dollar for office consultations of all descriptions. Prescriptions for gonorrhœa, syphilis, and everything else, are scratched off indiscriminately by these mentors (?) for a dollar apiece, and set afloat to bob up occasionally as a grim accusation against some of us poor devils whose consciences are sufficiently callous (or better, who have sufficient self-respect) to enable us to charge ten dollars for a prescription for gonorrhœa. There are men in this city who will give ether or chloroform for a fee of two dollars; men too, who occupy good positions. It is not pleasant to be informed that "Prof. So and So only charged me such a fee," etc. Many physicians make night calls for a couple of dollars. Now, under such circumstances, what is to be done by those who must practise for bread and butter? They must either work for nominal fees, or go to the wall. Not very pleasant, is it? But it is true. Probably the worst ele-

ment of all is the average German physician, who works for the most trivial fees as a rule. Not that I would slur our German *confrères*, but I would most emphatically remind them that their profession has more claims upon them than their nationality. They should not do American practice for German fees. Why they have imported the German fee-bill it would be difficult to say, but practically, that is what they have done in this city, at least. Dr. Wendt's suggestion, that the "doctors charge more," is a good one, but I fear he can never make the "pigs in the clover-patch" see it. Verily, between high-toned (?) and low-priced "professors" (save the mark), and free clinics and dispensaries, the young man with a "small, but growing (?) practice" has a hard road to hoe, and must make gynecological examinations, and treat stricture of the urethra and piles at two dollars the sitting, or purchase Tanner's secret, and learn to live on air and professional "ethics."

ONE OF THOSE
"WITH THE SMALL BUT GROWING, ETC."

CHICAGO, October 23, 1883.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from October 27 to November 3, 1883.

McKEE, JAMES C., Major and Surgeon. Relieved from duty in the Department of California and assigned to duty as Medical Director, Department of the Columbia. S. O. 249, par. 5, A. G. O., October 31, 1883.

PRICE, CURTIS E., Captain and Assistant Surgeon. Assigned to duty at Fort Custer, M. T. S. O. 187, par. 1, Department of Dakota, October 25, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 6, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 30, 1883.....	1	61	55	6	29	43	0	0
November 6, 1883.....	1	36	38	4	19	31	0	0
Deaths.								
October 30, 1883.....	0	22	9	5	7	28	0	0
November 6, 1883.....	0	16	6	4	3	19	0	0

SOME OF THE MEDICAL FATHERS IN NEW YORK.—As an item bearing on the longevity of medical men, it is gratifying to look over a list of medical worthies in this city who have reached their "three score years and ten." The majority are in good health, and not a few are actively engaged in professional pursuits. We append their respective ages as computed from the "Biographic Dictionary of Physicians." Willard Parker, 83; A. C. Post, 77; J. G. Adams, 76; William Detmold, 75; S. G. Hubbard, 75; Isaac E. Taylor, 71; Austin Flint, Sr., 71; Frank H. Hamilton, 70; and J. Marion Sims, 70.

DEAFNESS AMONG SCHOOL CHILDREN.—A second edition of "Causes of Deafness among School Children and its Influence on Education, with Remarks on the Instruction of Pupils with Impaired Hearing and on Aural Hygiene in the Schools," by Samuel Sexton, M.D., has been issued by the Bureau of Education, Washington.

DR. PAUL F. MUNDÉ has resigned from the New York Infant Asylum.

TRANSACTIONS OF THE MEDICAL SOCIETY OF GEORGIA.—This Society was particularly fortunate, at its session of 1883, in the number and diversity of valuable articles presented for consideration. Many of them exhibit a considerable degree of thought and research on the part of our Southern friends; and all show that the "Empire State of the South" is not behind in the advancement of medical science. The official "Transactions" form a handsome octavo volume which merits more consideration than mere shelf-room. The Society has offered a prize of $50 to Georgia physicians for the best essay presented before its next annual meeting.

TRANSACTIONS OF THE STATE MEDICAL SOCIETY OF INDIANA.—The present volume of "Transactions of the State Medical Society of Indiana" contains a number of interesting papers presented at the meeting in May. Sponge-grafting, bacteria, typhoid fever, Bright's disease, injuries to the head, and laceration of the cervix are a few of the variety of subjects ably discussed. Probably the most entertaining is a communication from Dr. Lopp, of Columbus, detailing some of the blunders of quacks in Indiana. In order to prevent a continuance of such blunders the Committee on Legislation recommends State examinations of all who wish to practise medicine.

THE DEATH OF M. THUILLIER.—It is not generally known that M. Thuillier, the young physician who died while serving on the cholera commission in Egypt, had already made some original and valuable discoveries in preventive medicine. It was he who discovered some time ago the microbe which causes the *rouget* or typhus in swine. At the Académie de Médecine M. Bouley recently read a letter from M. Maucuer, a veterinarian at Ballène, to the effect that by cultivating this microbe a vaccine had been found which had proved perfectly efficacious in protecting the swine from typhus.

PROPAGATING CANCER BY SEXUAL INTERCOURSE.—Dr. T. Gaillard Thomas says in answer to a question by one of his clinical class: There is undoubtedly great danger of propagating cancer by sexual intercourse, and repeated instances of cancer of the penis being contracted in this way are on record. The slightest abrasion of the penis may be sufficient for the absorption of virus from the malignant growth, and the husbands of women suffering from cancer of the uterus should, therefore, always be warned against intercourse with their wives. This, as you see, is a matter of very considerable importance, and I am glad that the point has been suggested.—*Medical Review.*

THE HYPODERMIC SYRINGE.—Dr. Frank D. Stevens, of Lynn, Mass., writes:—"I have never had any trouble with my hypodermic syringe since I have adopted the method of adjusting a rubber tip to the lower extremity of the syringe. For this purpose I use the upper two-thirds of a common rubber tip such as is found upon an ordinary medicine dropper. In this way the syringe is kept absolutely tight, and if care is taken to leave a little of the solution in the syringe after using, the packing will remain moist and pliable for a long time."

A FREQUENT MISTAKE.—A writer points out the "verbal pitfall" into which many fall, of speaking of malaria as though it were a disease instead of a cause of disease.

THE DIGESTIBILITY OF LOBSTERS.—Dr. Norton Folsom writes (*Boston Medical and Surgical Journal*) that while in service at the Taunton Lunatic Hospital he had charge of the diet of about four hundred and fifty patients. During the plentiful season, all patients not acutely sick had well-boiled plain lobster once a week. Not a single instance of digestion disturbance occurred in consequence. Dr. Folsom thinks that lobsters, if fresh and well boiled, are a wholesome food for all without a special idiosyncracy against them.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 20 NEW YORK, NOVEMBER 17, 1883 Whole No. 680

Original Articles.

TYPHOID FEVER IN NEW YORK CITY.

By FRANCIS DELAFIELD, M.D.,

PROFESSOR OF PATHOLOGY AND PRACTICAL MEDICINE, NEW YORK.

TYPHOID fever is a disease which seems to be fairly endemic in New York, although it is much more prevalent in some years than in others. If we turn to the records of the Board of Health, we find that the mortality from typhoid fever, since the year 1854, has been as follows:

Year.	Deaths.	Year.	Deaths.	Year.	Deaths.
1854	136	1864	661	1874	275
1855	139	1865	513	1875	348
1856	133	1866	514	1876	283
1857	141	1867	345	1877	275
1858	176	1868	326	1878	245
1859	206	1869	378	1879	178
1860	212	1870	422	1880	241
1861	234	1871	239	1881	446
1862	404	1872	364	1882	362
1863	531	1873	295	1883 (to Oct. 1st)	274

The disease was most prevalent in the years 1863, 1864, and 1865, the same years during which typhus fever existed as an epidemic in New York.

The time of year during which the disease prevails can be seen from the following table of

CASES REPORTED AT THE SANITARY BUREAU.

	1878.	1879.	1880.	1881.	1882.	1883.	Total.
January	43	37	22	42	46	47	237
February	27	21	31	23	30	25	157
March	16	19	33	58	25	48	199
April	29	21	21	82	22	26	201
May	24	23	37	50	25	29	188
June	25	27	22	31	20	28	153
July	36	24	39	63	40	93	293
August	98	53	46	115	96	244	652
September	89	74	63	132	117	356	833
October	105	62	64	138	147	...	...
November	62	34	73	129	68	...	...
December	44	37	57	102	50	...	...
Total	598	432	508	965	686	...	...

It appears that while cases of the disease occur in every month, yet that August, September, and October are characterized by a large increase in the number of patients. In order to obtain a still more accurate idea of the prevalence of the disease, I have had prepared some statistics of the cases which have occurred in the hospitals during the years 1877 to October 1, 1883:

Hospitals.	1877.		1878.		1879.		1880.		1881.		1882.		1883 to Oct. 1.		Mortality, per cent.
	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	
Riverside	8	4	20	8	12	4	9	1	62	6	11	1	13	4	20.7
Bellevue	49	17	31	11	11	4	22	10	52	16	105	28	41	15	32.4
Roosevelt	16	4	11	3	13	1	14	0	27	11	54	17	12	8	36.8
New York	12	2	7	2	12	2	19	7	27	5	11	3	19	2	21.4
St. Luke's	5	1	8	2	7	2	8	3	19	3	29	9	9	2	25.8
St. Vincent's	14	1	8	2	6	0	9	4	20	6	14	2	17	8	25.9
St. Francis'	20	7	24	4	17	2	18	6	56	17	71	11	57	9	21.3
Mt. Sinai	11	1	15	2	36	8	11	2	56	9	18	4	22	3	17.1
Total	135	37	124	34	114	23	110	33	319	73	313	75	190	51	
Percentage of mortality	27.4		27.4		20.1		30.0		22.7		23.9		26.8		

Altogether 1,305 cases.

From this table it will be seen that the disease prevailed during the years 1877, 1878, 1879, and 1880 to a moderate extent, and with a varying degree of mortality, the year 1880 being marked by the highest percentage of mortality. In 1881, 1882, and 1883, although the whole number of cases was greater, yet the mortality was not very great.

In determining the age of the patients from the hospital records, it must be remembered that the regular population of these hospitals consists of adults, children being admitted only in small numbers. Allowing for this circumstance, the relative frequency of the disease at different ages has been as follows:

5 to 10	49	30 to 40	186	60 to 70	8
10 to 20	336	40 to 50	77	70	4
20 to 30	604	50 to 60	16		

Etiology.—The city of New York is not a favorable field for studying the etiology of this disease. The entire city has the same water-supply, and a large part of it the same system of sewerage. A considerable number of the cases originate outside of the city, and are taken sick here. The determination of the local causes in the city will probably be facilitated by the investigations which are now being carried on by the Board of Health.

LESIONS.

Intestinal lesions.—The regular lesions of the solitary and agminated glands of the ileum were in most cases fairly developed. Some of the patients died while these glands were only swollen, some while the sloughs were adherent, some after the ulcers were completely cleaned off. The changes were, however, even in the worst cases confined to the glands, with sometimes a little infiltration of the surrounding tissue. The large infiltrations of the intestinal wall, which occur in some epidemics, have not come under my observation. But in a considerable number of the fatal cases the intestinal lesion was inconsiderable: only a few swollen agminated glands with partial ulceration.

Perforation of the intestine with peritonitis has not been of common occurrence. In one case the perforation was through an ulcer in the wall of the vermiform appendix.

In the colon, enlargement and ulceration of the solitary glands was found only in five cases.

The mesenteric glands were swollen in all the cases, sometimes more sometimes less, generally corresponding to the degree of the intestinal lesion. When the glands were very much swollen there was sometimes a little fibrine on the peritoneum over them; in one case this had extended to a general peritonitis. In two cases these glands had suppurated and produced local peritonitis.

The spleen was soft in all the cases, usually enlarged, but sometimes of normal size or even small. In one case, a boy eight years of age, the spleen was ruptured with large entravasation of blood into the peritoneal cavity.

Croupous inflammation of the colon was present in one case. The lower two-thirds of the colon were coated with a uniform layer or fibrine.

General peritonitis, without perforation of the intestine, or suppuration of the mesenteric glands, was seen in one case.

The parotid glands have not been inflamed in any o the cases which I have seen.

The liver in many of the cases was enlarged, with some parenchymatous degeneration of the hepatic cells.

The kidneys in most of the cases were the seat of more or less severe parenchymatous nephritis; but these lesions of the kidney did not always produce changes in the urine during the life of the patient.

The heart, although sometimes soft and flabby with degeneration of the muscular fibres; was yet in many cases firm, strongly contracted, and with perfectly normal muscle.

The lungs have been diseased to some extent in many cases. Moderate degrees of bronchitis with congestion of the larger bronchi and an increased production of mucus were often seen.

Some degree of congestion and œdema was present in nearly all the lungs, involving regularly their most dependent portions. Less frequently the congestion of the dependent portion of the lungs was much more marked, and the lung-tissue was at the same time dense and unaërated. A few pus-cells, a little fibrine and granular matter were often to be found in the air-vesicles of the congested portions of lung.

In two cases the posterior portions of the lungs were not only congested, but there were also irregular areas of red hepatization.

In three cases the lungs exhibited the lesions of intense general bronchitis.

In one of these cases the larger bronchi were congested and coated with mucus. The smaller bronchi were full of pus, their walls were thickened. Throughout both lungs were numerous circumscribed portions of lung, from the size of a walnut to that of a pigeon's egg, which were dense, smooth, unaërated, of a deep, livid color—collapsed lung.

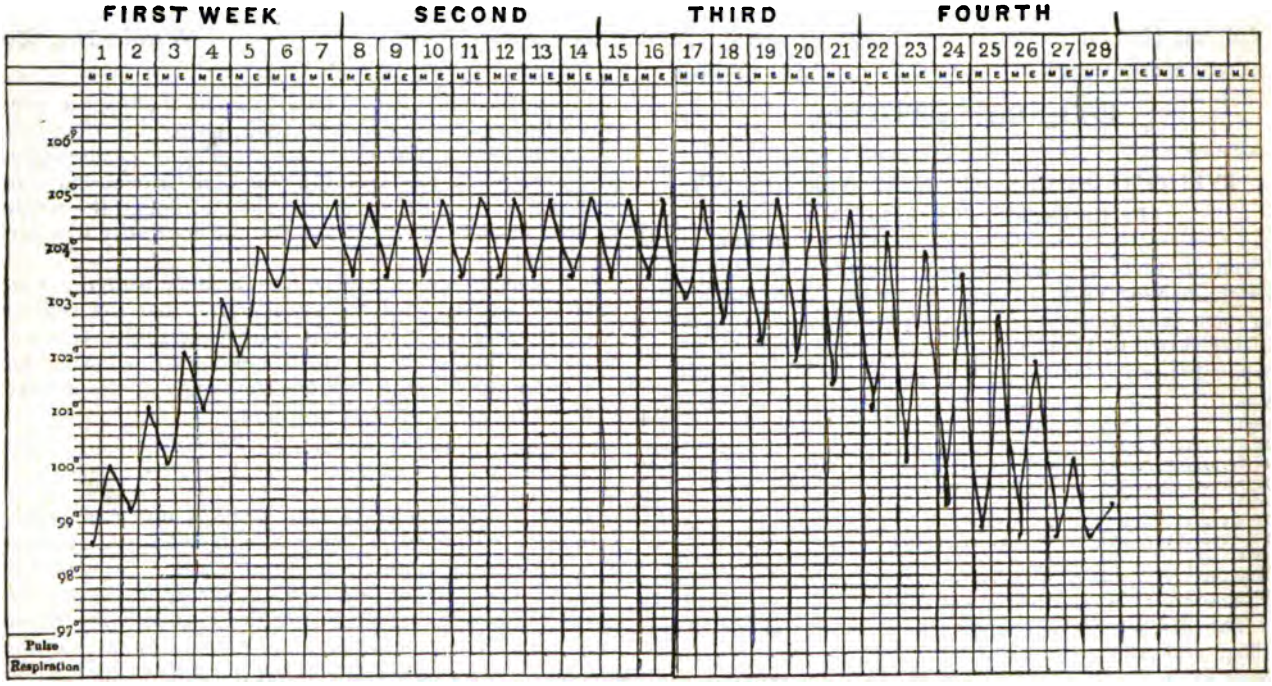

FIG. 1.

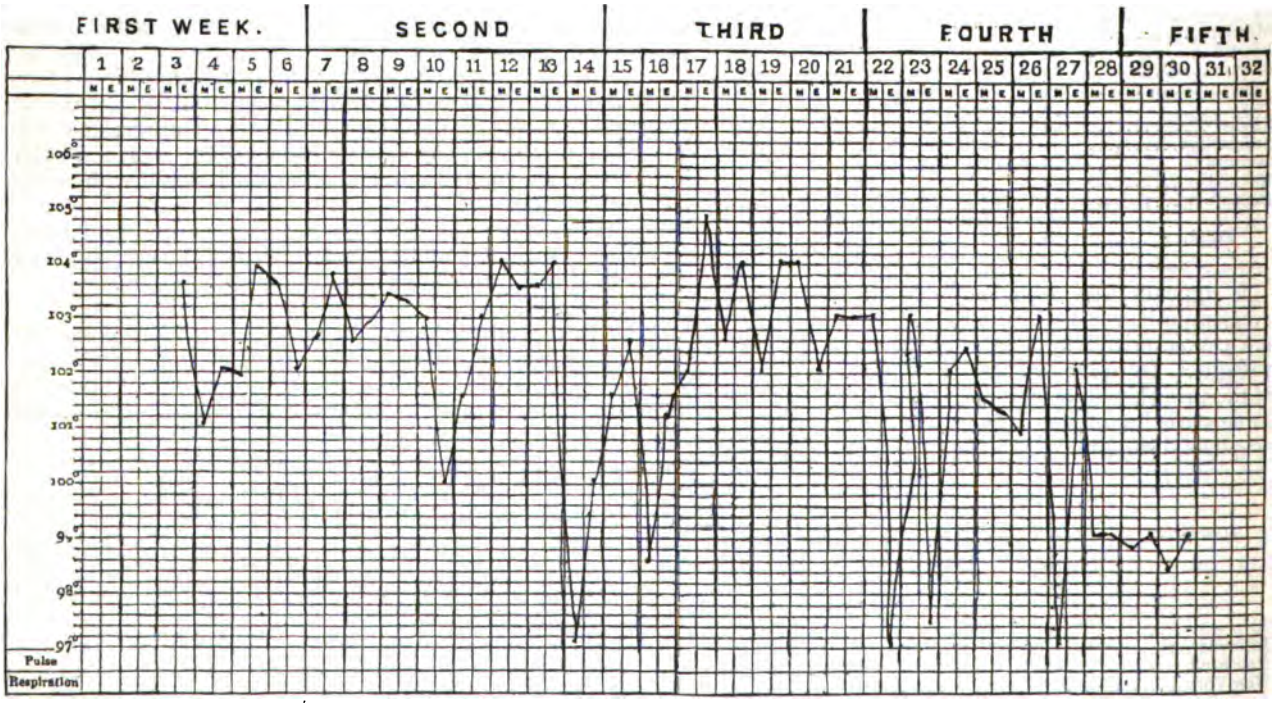

FIG. 2.

In the second case the lungs were small and congested. The larger bronchi were congested and coated with mucus; the smaller bronchi were full of pus, their walls were thickened and infiltrated with cells, and around them were small zones of intense congestion or of red hepatization.

In the third case the larger bronchi were congested, the smaller bronchi had their walls thickened and infiltrated with cells. Around these small bronchi were small zones of white hepatization, and around these peri-bronchitic zones larger areas of red hepatization.

Lobar pneumonia was found in two patients. In one nearly the whole of both lungs was consolidated, in the other only a single lobe of one lung.

In the brain and its membranes I have found no lesions, except old ones not belonging to the disease.

The voluntary muscles have presented their characteristic granular and waxy degeneration in a moderate number of the more severe cases; in many other cases no change in the muscles was found.

It is evident, therefore, that the anatomical type of the disease, as it has prevailed in New York during the past eight years, has not been a severe one. Neither the characteristic nor the accessory lesions have been more than fairly marked.

In speaking of the lesions of the disease I have drawn from a larger number of cases than that employed for the study of the symptoms, for many of the hospital cases die with hardly any history.

Symptoms.—To illustrate the character of the symptoms I have used the records of 102 cases, all occurring during the past five years. A larger number of cases could have been collated, but I have preferred to confine myself to this number of cases, all of which were well-marked examples of the disease.

Prodromata.—A distinct history of a prodromic period was obtained only in 18 cases. In all the conditions were much the same: languor, headache, indisposition to mental or bodily exertion, loss of appetite, constipation or diarrhœa, irregular chilliness, sometimes bronchitis. The duration of this period varied from four days to five weeks.

Invasion.—The charcter of the invasion was ascertained in 83 cases. In 37 cases the patients noticed a chill at the very commencement of the disease. This chill was sometimes described as mild, sometimes as severe; it occurred only once, or was repeated for several days. The chill was always followed by a febrile movement, often accompanied with headache, sometimes with vomiting, sometimes with nose-bleed, and in 19 cases with diarrhœa.

In 25 cases the first symptom was diarrhœa, accompanied with fever, sometimes with headache, sometimes with nose-bleed. There were, therefore, altogether 44 cases in which diarrhœa was one of the first symptoms, and in 3 of these blood was mixed with the passages during the first few days.

In 15 cases headache and fever, sometimes with nose-bleed, marked the onset of the disease.

In 6 cases a marked bronchitis, with cough, expectoration, and physical signs, was the most prominent feature during the first week.

Altogether nose-bleed was mentioned by 14 of the patients. Pain in the right iliac fossa or abdomen was often complained of.

In the other cases it could not be ascertained exactly when or how the disease began. This seemed to be due sometimes to want of intelligence on the part of the patient, sometimes to the existence of accidental conditions to which attention was directed rather than to the real disease.

Temperature.—Complete records of the temperature embracing the first days of the disease were not obtained in any cases. Many of the patients did not come under observation until the disease had existed for some time, in others the temperature was not taken until the disease became very manifest.

The schematic curve for the regular four weeks of typhoid fever is that given in Fig. 1.

We may compare with this some of the temperature charts obtained from different patients: Fig. 2 is from a patient who came into the hospital on the third day of the disease and became convalescent on the thirtieth day. For two days he had creeping chills, general malaise, pharyngitis, and came into the hospital on the third day and went to bed. On the ninth day moderate diarrhœa. On the fourteenth day hemorrhage from the bowels attended with a fall of temperature to 97°. On the sixteenth day two more hemorrhages were followed by a fall of temperature to 98.6°.

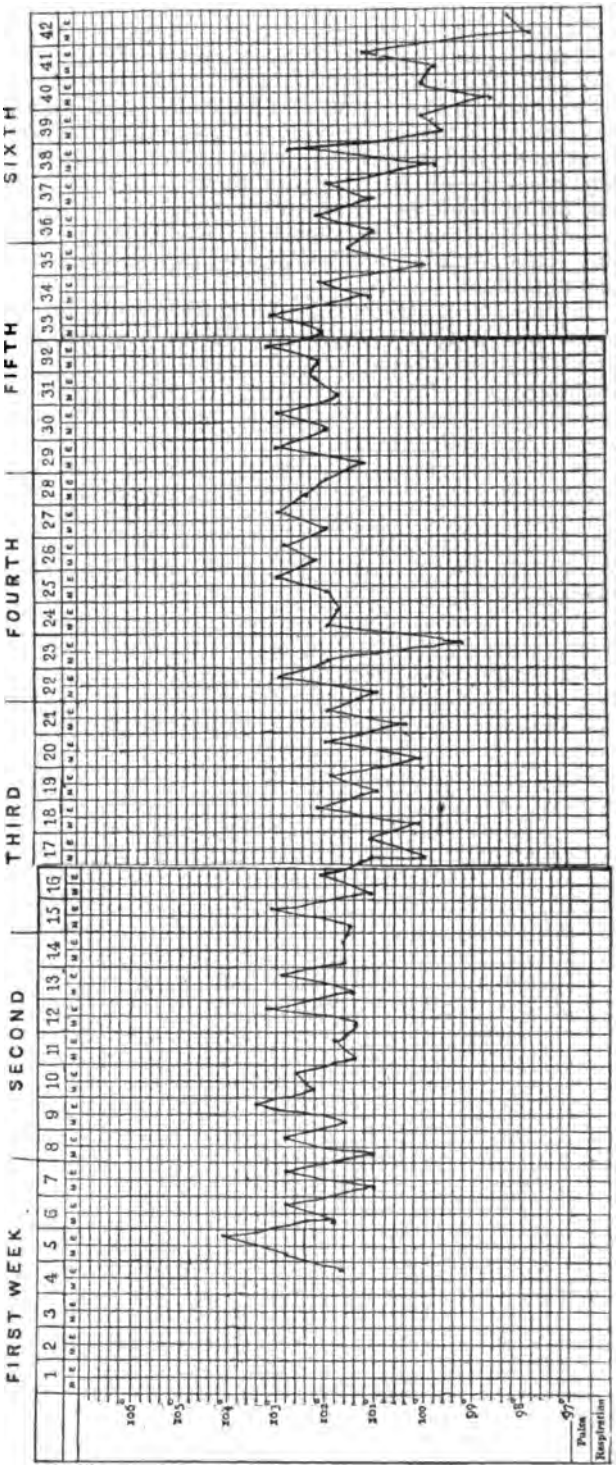

FIG. 3.

The temperature curve in Fig. 3 was taken from a regular case without complications. All the symptoms were well marked and the convalescence was uninterrupted.

A study of all the temperature curves shows that we must not expect too close a correspondence with the schematic curve.

During the first week the temperature regularly rises, but there is a great difference in the rapidity of the rise and the number of days required for it to reach its maximum. In hospital patients the transfer to the hospital seems often to produce a temporary rise of temperature. In some patients morning chills followed by afternoon fever may be repeated several times during the first week. There may be sudden falls of temperature for six, four, or twenty-four hours during the first week.

In the second week the temperature approaches the continuous type with moderate morning remissions; but sometimes the morning remissions are very marked. Sometimes the morning temperature is the highest; sometimes the temperature falls permanently to the normal by the fifteenth day; or after beginning to fall by morning remissions the temperature may go up again and continue to the end of the third, fourth, or fifth week; or, in fatal cases, the temperature may reach its highest point just before death, or fall to 101° or 100°.

In the third week the temperature may continue as in the second, or it may fall more or less regularly with normal remissions.

In the fourth week the temperature usually falls by morning remissions, but this fall is often interrupted and irregular. The morning remissions may be followed by sweating. Or, after beginning to fall, the temperature will rise again and continue till the end of the fifth, sixth, seventh, or eighth week.

In the cases without relapses convalescence was most common at the end of the fourth week; it was not uncommon in the third week, and it was sometimes delayed till the end of the fifth, sixth, seventh, or eighth weeks. When there were relapses the disease might be still further prolonged.

The height of the temperature was usually in proportion to the disease, but to this rule there were many exceptions: mild cases with high temperatures, and severe cases with low temperatures. There was also a good deal of difference in the cases as to their ability to bear the temperature. Some patients would be much more affected by a temperature of 102° than others by a temperature of 105°.

The pulse usually followed the curve of temperature, becoming more rapid as the temperature was higher. During the first week of the disease the pulse was strong, from 80 to 100. In the second and third weeks it was more rapid and feeble, often dicrotic. As a rule the pulse became more rapid as it was more feeble, but sometimes it was both feeble and slow. Generally speaking, a rapid pulse was an unfavorable symptom, but sometimes the pulse continued rapid while the temperature was falling and convalescence approaching. In the cases that died with a lower temperature, the pulse was feeble and rapid. Some cases ran their entire course with a pulse of from 60 to 80; when this was joined with marked cerebral symptoms, the cases closely resembled cerebro-spinal meningitis.

The appearance of the patients was characteristic. A dull, apathetic expression, the skin of the face dusky-colored, the cheeks often flushed, the mind dull and sluggish—all these conditions were well marked. In only one case were these symptoms notably absent, in a patient who for the first two weeks had a bright face and an active mind.

The tongue was usually at first coated with a thick white fur, afterward dry and brown; sometimes it remained clean, but became gradually dry, glazed, and fissured.

Nose-bleed occurred in many of the cases, not only in the invasion of the disease, but later in its course. In only one case did it reach such a degree as to become alarming.

Headache and sleeplessness were most common in the prodromic period and during the first week of the disease.

Delirium of an active and well-marked type was present in forty-one cases; it marked a severe form of the disease. Lower degrees of delirium, occurring especially at night, were much more common.

Complete unconsciousness was usually a fatal symptom, although apathy verging on stupor was seen in many of the cases which recovered.

Vomiting not only marked the invasion of the disease, but sometimes continued throughout its course, and was then a most annoying symptom, interfering with the administration of food and medicine.

Diarrhœa was present in 82 cases, and in 44 of these it began during the first days of the disease. In 11 cases, after beginning during the first days of the disease, it only lasted a few days and then stopped. In 51 cases it lasted through nearly the whole of the disease, and in 20 cases it only lasted for a few days in the second week.

Constipation throughout the whole course of the disease was observed in eighteen cases. It was almost the rule to have some degree of constipation during convalescence.

The eruption is recorded as being fairly marked in forty-four cases, but in only a few of these was it very abundant. It seemed to be more constant in the cases which have occurred during the last year. It was usually seen during the second week, sometimes appearing in successive crops, especially with the relapses.

Tympanitis to a greater or less degree was often present; it was most marked in the patients who were constipated.

Pain over the abdomen certainly existed in a number of the cases, but the records on this point were somewhat uncertain.

The urine contained albumen in twenty-three cases; it was never present in large amount. Casts were found in the same cases in small numbers. It contained blood in two cases.

Hemorrhage from the bowels occurred in twenty-three cases, and in six of these cases it proved fatal. In three cases there was moderate bleeding during the first weeks of the disease. In the other cases it occurred at the following periods: On the eighth day, one case; on the tenth day, one case; on the eleventh day, one case; on the twelfth day, one case; on the thirteenth day, three cases. In the second week, three cases; in the third week, two cases; in the fourth week, four cases; in the fifth week, one case; in the sixth week, one case; in the seventh week, one case. Throughout the disease, one case. Most of these hemorrhages were considerable in amount and repeated several times.

Hemorrhages in the skin were only seen in one case.

Complications.—A pustular eruption of the skin, the pustules situated all over the body and reaching the dimensions of small abscesses, was seen in three cases.

Suppurative inflammation of the middle ear, with discharge of pus, occurred in five cases.

Croupous pharyngitis existed in one case during the first week of the disease.

Bronchitis of a severe type, or broncho-pneumonia, existed in twenty-four cases, and in sixteen of these cases occurred early in the disease. In many other cases slight forms of bronchitis were present. When bronchitis occurred early in the disease its symptoms were sometimes so marked as to obscure those of the typhoid fever. Only three of the cases of bronchitis proved fatal.

Lobar pneumonia occurred in two cases, and both of these caused the death of the patient.

Repeated attacks of feeble heart-action, the radial pulse becoming imperceptible, were observed in one patient. She finally died in such an attack.

Peritonitis occurred in only four cases. In two of these it was due to perforation of an ulcer of the ileum, in one to perforation of the appendix vermiformis, an

in one to inflammation of the mesenteric glands. In all the four cases the peritonitis was fatal.

Thrombosis of the femoral vein occurred in one case.

Dysentery was observed in five cases. It was developed during convalescence, in the fifth, sixth, and eighth weeks. In one of the cases it proved fatal, and was then found to be of the croupous variety.

The course of the disease.—In the cases which recovered, excluding the cases with relapses, the duration could be ascertained in sixty-one. In these convalescence commenced at the following periods: On the sixteenth day, one case; on the eighteenth day, four cases; at the end of the third week, six cases; at the end of the fourth week, nineteen cases; at the end of the fifth week, twelve cases; at the end of the sixth week, four cases; at the end of the seventh week, four cases; at the end of the eighth week, one case; at the end of the ninth week, nine cases; at the end of the tenth week, one case. In the cases which lasted longer than three weeks there were often periods of from twelve to twenty-four hours during which the temperature fell, and it seemed as if convalescence was commencing; but then the temperature rose again and the disease went on.

Relapses were observed only in seven cases, all of which recovered. The relapses occurred as follows: In the fourth week cessation of all the symptoms for ten days, then a relapse of fourteen days, then convalescence. In the fourth week cessation of all the symptoms for five days, then a relapse for ten days, then another cessation for fourteen days, then a second relapse for eight days, and then convalescence. In the fourth week cessation of the symptoms for seven days, then a relapse for two weeks. In the sixth week a cessation of the symptoms for four days, then a relapse for seven days. In the sixth week a cessation for thirteen days, then a relapse for two weeks. In the sixth week a cessation for thirteen days, then a relapse for one week. In the tenth week a cessation for five days, then a relapse for one week. All of these cases were very seriously ill, and yet recovered in spite of the long continuance of the disease.

The thirty-four fatal cases died at the following periods: On the eighth day, two cases; on the tenth day, one case; on the eleventh day, one case; on the twelfth day, one case; on the thirteenth day, five cases; on the fourteenth day, one case; on the sixteenth day, two cases; on the seventeenth day, one case; on the eighteenth day, one case; on the nineteenth day, one case; at the end of three weeks, two cases; at the end of four weeks, four cases; at the end of five weeks, four cases; at the end of six weeks, five cases; at the end of ten weeks, one case.

The manner of death was as follows: In fifteen cases the patients seemed to die from the direct effect of the disease. In most of these cases the temperature was high and the pulse rapid and feeble. Death took place from the eighth day to the end of the sixth week. In three cases the immediate cause of death appeared to be severe broncho-pneumonia, death taking place on the eighth day, at the end of three weeks, and at the end of five weeks. In six cases death followed soon after large hemorrhages from the bowels; two cases on the thirteenth day, one on the fourteenth day, one on the thirty-second day, and two at the end of six weeks. Four cases died with acute general peritonitis. In three of these the peritonitis was due to perforation and proved fatal on the eleventh, thirteenth, and twenty-eighth days. In one case it was due to inflammation of the mesenteric glands, the patient dying at the end of six weeks.

One case died of dysentery at the end of ten weeks; one case died of syncope at the end of four weeks; one case died in collapse, with a temperature of 95° in the rectum after sponging with ice-water; one case died from rupture of the spleen at the end of four weeks; two cases died with lobar pneumonia, one on the eighth and one on the eleventh day.

It may be instructive to recite in detail a few of the egular cases.

Case I.—A male, aged twenty-four; on August 18th and 19th had diarrhœa, but did not feel ill. On August 21st he was seized, after dinner, with an attack of vertigo and partial unconsciousness. Similar attacks have been repeated and have been accompanied by constant headache, pain in the back, and a general tired, weak feeling. He was admitted to the hospital on August 25th. He then had the appearance of a patient suffering from typhoid fever; high temperature, tongue brown and dry, face flushed, mind dull. On August 29th the eruption appeared on the abdomen and chest. On August 31st he passed blood and mucus from the bowels; before this there was no diarrhœa. On September 1st he was a little delirious at night. On September 4th he felt so well that he wished to sit up. On September 5th he became delirious, his pulse was rapid and feeble, his tongue again became brown and dry, and on September 6th he died. The table shows the temperature and pulse.

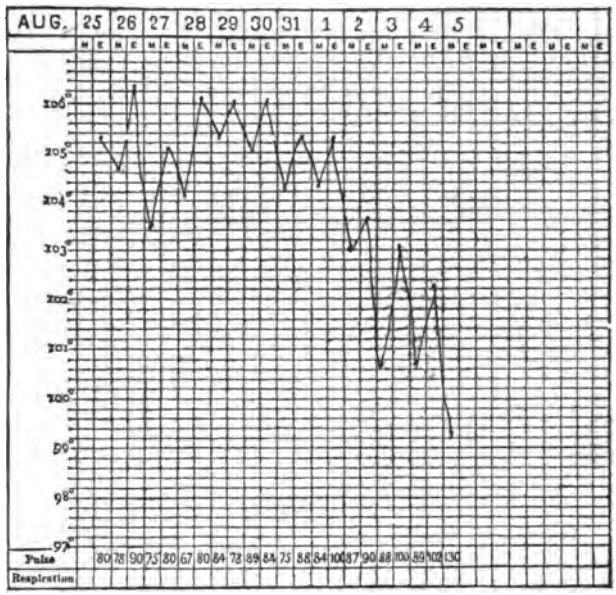

Fig. 4.

In the intestine only four of the agminated glands were found swollen, but not ulcerated. The mesenteric glands were swollen. In the left ventricle of the heart was an old ante-mortem clot the size of a chestnut. In the enlarged spleen were three infarctions.

This was a case in which, from the clinical history, one would have expected to find the intestinal lesions developed in proportion to the severity of the constitutional symptoms.

Case II. is a contrast to the preceding one. A man, twenty-two years of age, began on August 1st to have diarrhœa. Some of the passages were fecal, some were streaked with blood. He had no other symptoms and did not feel ill. On August 6th, for the first time, he remained in bed; his pulse was 100, his temperature 99°; he had pain in the abdomen and diarrhœa. On August 7th, pulse 100 to 110; temperature 100° to 101½°; tongue dry; the diarrhœa has stopped. On August 10th, pulse 100 to 110; temperature 101° to 102°. August 11th, large passages of blood from the bowels; pulse 110 to 125; temperature 101° to 102°; he became delirious. August 12th, died.

For nearly the whole length of the ileum the solitary and agminated glands were very much swollen and ulcerated. In the colon for its entire length the solitary glands were swollen and ulcerated. In the stomach were a number of small round ulcers. In this case the characteristic lesions were developed to an unusual degree, and yet the fever and other constitutional symptoms were not at all marked.

Case III.—A man, aged twenty-five; said that he had not been feeling well for two weeks; that on October 6th,

after working in an ice-house, he caught cold and had cough and headache, fever and sweating. October 10th his face was flushed, his tongue dry and brown, his bowels loose, his mind dull and apathetic; his urine contained a little albumen. There was a good deal of dyspnœa, and coarse and subcrepitant râles could be heard over the whole of both lungs. The evidences of bronchitis continued. On October 13th he became delirious; on October 17th he had a number of large bloody passages from the bowels, his skin became cold and livid, his pulse rapid and very feeble, and he died on October 18th. The temperature and pulse can be seen in the table.

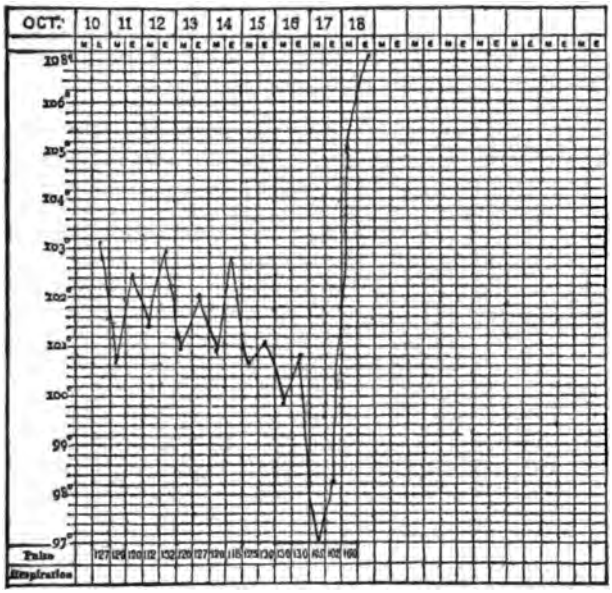

FIG. 5.

After death the lungs exhibited the lesions of intense general bronchitis. In the small intestine the solitary and agminated glands were very much swollen, and formed large ulcers from which the sloughs had cleaned off.

In this case the bronchitis seemed sufficient to account for all the patient's symptoms until he began to have the hemorrhages from the bowels.

CASE IV.—A man, aged forty-five; said that he had not been feeling well for several weeks. On November 25th he felt worse, but went on a journey and returned on November 28th. On November 29th, in the evening, he had a severe chill and remained in bed the next day. His bowels had been constipated, and on this day were acted on by medicine. On November 30th his temperature was taken for the first time and found to be 105°. From this time till December 5th the patient was in bed with a temperature of from 101° to 102°. His tongue was clean and moist, his mind clear, his bowels constipated; no eruptions, but several attacks of nose-bleed. On December 5th he began to cough and expectorate muco-purulent matter. On December 8th there were dulness on percussion and loss of breathing over the lower part of both lungs. On December 9th, pulse, 114 to 140; temperature, 103° to 99½°; respiration, 34 to 40. On December 10th, pulse, 114; temperature, 102°. On December 11th, pulse, 114 to 120; temperature, 102½° to 102.° The patient now began to look worse, although his tongue was still clean and his mind clear. The constipation had continued, and now tympanites was developed. December 12th, pulse, 120; temperature, 102° to 101½°. December 13th, pulse, 120 to 128; temperature, 100½°. December 14th, pulse, 120 to 128; temperature, 100° to 101°. The tympanites continued, became worse, and distressed the patient extremely. The bowels only moved with medicine. The patient died with feeble heart on December 15th.

At the autopsy the bronchi were found congested and coated with muco-pus; both lower lobes of the lungs were congested and unaërated. In the small intestine a number of the agminated glands were changed into clean, smooth ulcers extending down to the muscular coat.

This case was as obscure as need be during the patient's life.

Treatment.—A fair idea of the manner in which typhoid fever is treated in New York may be gathered from the routine of the different hospitals.

In the New York Hospital many patients are simply put on a milk diet, with the addition of a moderate amount of whiskey, and no other treatment is used. Peptonized milk instead of ordinary milk is thought to be of service. For high temperatures the body is sponged with equal parts of alcohol and water, and sometimes the fluid extract of eucalyptus is given in fifteen-minim doses. Quinine is not much used. Tympanites is treated with turpentine internally, and in stupes over the abdomen. Opium is given when there is hemorrhage from the bowels or excessive diarrhœa.

At St. Luke's Hospital the treatment is the same, except that quinine is sometimes employed to reduce the temperature, and ergotine hypodermically for intestinal hemorrhage. Either opium or chloral are used to control restlessness and sleeplessness.

At St. Francis' Hospital, if the cases are seen early in the disease, large doses of calomel are given, with the idea of aborting the disease. Quinine in large doses is given to most of the patients. The salycilate of soda or the benzoate of soda are given by some of the physicians throughout the disease. Cold water in any form, to reduce the temperature, is but very little used. A solution of the acetate of alumina is given to nearly all the patients to prevent or control the diarrhœa.

At St. Vincent's Hospital quinine in doses of two grains every two hours is given to control the temperature. Cold water is not employed. Opium is used with diarrhœa and intestinal hemorrhage.

At the Mount Sinai Hospital quinine in large doses is given to nearly all the patients. Cold water is not much used, but sometimes the patients are sponged off.

At Bellevue Hospital the treatment varies in the different divisions.

In one division the peptonized milk is much used. Quinine, in large doses, is given when the temperature reaches 103°, and sponging is also sometimes used. Opium, the bromides, and cold to the head are used for the restlessness.

In another division quinine in moderate doses is given to most of the patients. For temperatures over 103° sponging with cold water or the Kibbee cot and sprinkling with cold water are used. Opium is given when needed.

In another division carbolic acid gtt. j. and tincture iodine gtt. ij. every two hours are given early in the disease. Quinine in ten-grain doses every half hour is given to reduce the temperature. Sponging with cold water is sometimes used. Opium is employed for severe diarrhœa.

In another division occasional sponging, and whiskey and opium when required are the only treatment.

At the Roosevelt Hospital full bathing has been tried in many cases but now cold sponging is more used. Bismuth and pepsin are given to many of the patients.

In all the hospitals milk, either simple or peptonized, is the regular diet of the patients.

THE DOCTRINE OF SPONTANEOUS GENERATION REVIVED.—At a recent meeting of the Academy of Medicine of Paris, M. Bouchardat maintained that in the genesis of phthisis, certain portions of the lung were not expanded sufficiently, there occurred local stasis, and at these points the lymph-corpuscles are metamorphosed into the bacilli of tuberculosis. This is a revival of the doctrine of heterogenesis upheld by Bastian. M. Bouchardat does not believe in the contagiousness of phthisis.

FUNCTIONAL DISEASES OF THE HEART.

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(Continued from page 425.)

PART II.—PATHOLOGICAL.

FUNCTIONAL diseases are said to coexist with integrity of the structure whose physiological action is disturbed. While it is admitted that there may be morbid alterations of texture, these are too subtle to be detected by the senses of the observer. The stomach of the dyspeptic has been examined after death, and blood-vessels and peptic glands have been pronounced sound. The arythmic heart, whose disorderly action long gave so much trouble, has been found normal at the autopsy. Facts of this kind are doubtless sufficiently abundant to justify the distinction which has been made between functional and organic diseases. At the same time it must be understood that the distinction is only a relative one. It is from the nature of things impossible that disease of any kind can exist without impairment of structure. If the function is deranged, it is because the interstitial movements of waste and repair which are going on in the organ are disturbed, for the function of a part is in the closest correlation with its nutrition. To say that there is disturbance of interstitial processes is to say that there is molecular disease; hence disease of structure. It is, however, sufficient for the purpose, if, while admitting that the line of separation between functional and structural diseases is becoming more and more indistinct (and this is especially true in regard to the stomach affections), we content ourselves with defining functional diseases as diseases in which there is marked deviation from the standard of health, such deviation being a change in innervation and in the degree of activity of the organ and its capacity for effective work, and the expression of molecular alterations which are inappreciable to the senses.

Under the head of functional diseases of the heart we have to consider disorders of motility and disorders of sensibility.

The heart of the adult person beats between seventy and eighty times a minute. Its action is remarkable for its rhythmical character; so strong is the tendency to rhythmical contraction that in cold-blooded animals not only does the entire heart continue to act after removal from the body, but even separated portions will contract and relax with great regularity for a long time.[1] Each beating of the heart is composed of several factors; there is first the systole, followed after a brief pause by the diastole, and the cardiac revolution terminates by another pause longer than the first; then comes a new succession of similar systolic and diastolic impulsions and pauses. It is moreover essential to the normal action of the heart that its function shall be accomplished without pain. This rhythmical succession of pulsations may be accelerated, or may be broken or become intermittent; the heart, instead of performing its work painlessly, may "suffer in every fibre," and it may give expression to an exhausted or anæmic condition by asystolia and syncope.

The heart's action ought not to be easily excited by trivial and varying causes, such as moderate exercise, change of posture, and taking food and stimulants. If liable to excitement by trifling circumstances it is, as Broadbent has pointed out, an unfavorable sign.[2]

It is apparent that in describing functional heart derangements we cannot present any clear-cut nosological demarcations, as it is in our power to do when describing the organic affections. Though there are doubtless pathological modifications of muscle, nerve, or ganglia, as the substrata of these derangements, we are unable at present to define them; we can only recognize certain manifestations, which, arising from a variety of causes, are common to a variety of pathological conditions. In treating these manifestations as diseases, rather than as symptoms, some writers have introduced confusion into their treatises. Arythmia, for instance, is not a disease, it is simply a symptom and has widely different etiological antecedents, the proximate cause probably being the same in all cases. The same may be said of palpitations.

The heart may be deranged in its *power*, in its *rhythm*, and in its *sensibility*; hence the three fundamental divisions of functional heart-troubles, *asthenia*, *disordered rhythm*, *cardiodynia*. By this I mean that in all functional derangements there is predominance of some one of these characteristics, though all may co-exist, or any two may be intimately associated, as asthenia and arythmia. It is moreover worthy of note that all the valvular diseases and the degenerations of the myocardium are attended with one or more of these semeiological phenomena, so that in describing functional manifestations we are continually obliged to make incursions into the territory of admittedly organic diseases.

This is not all. Every prostrating lesion or ailment of the organism—a traumatism, a fever—produces some marked modification of the heart's innervation and nutrition, which expresses itself in deviations from the normal force and rhythm of the heart's action.

This explains why we cannot separate by a sharp line the functional disorders from the disorders occasioned by profound perturbations of the economy. The exaggerated, rapid action of the heart in certain pyrexial states cannot generically be separated from that quick, vehement action which characterizes palpitations, and can only be differentiated by arbitrarily classifying palpitations as apyrexial, or by insisting on the tumultuousness of palpitations (ordinarily so called), or the element of distress which so often characterizes these excited throbbings.

I.—ASTHENIC FORMS OF HEART DISEASE.

An asthenic condition, in which the heart, in its laboring mechanism, is overcome by fatigue, malnutrition (or both), is at the basis of all the functional troubles of this organ. If integrity of myocardium and ganglia persist, the heart will grapple effectively with its tasks, and if augmenting difficulties must be met by hypertrophy, hypertrophy will ensue. There will be increased action, with a pulse varying according to the occasion, but all will be within physiological limits. Excessive muscular exertion, hindering as it does respiration and the free passage of blood through the lungs, entailing thus undue fulness of the venous system and overloading the right heart, makes it difficult for the left ventricle to fill the systemic arteries; if nutrition be maintained at a high mark, the cardiac muscle may continue to do its work well, but if nutrition be inadequate, and especially if the heart be whipped into increased activity by alcoholic stimulants, muscular contractility is exhausted, the cardiac ganglia become anæmic and irritable, passive dilatation with disorderly action takes place, and all the symptoms included under the name of the forced heart.

The temporary perturbations of the heart's action, which occur under the influence of hard work, are too familiar to everybody to require insisting on here. That, moreover, sudden or prolonged distention of the fatigued right ventricle may cause passive dilatation of that side of the heart, with the necessary cortège of symptoms, is admitted by all authorities. The following fact, related by Clifford Allbutt, *à propos* of himself, is an example to the point. During a journey in Switzerland, after several days of fatigue, in which he was climbing mountains difficult of ascent, he was seized with strange shortness of breath, accompanied by very painful sensations of oppression and beating in the epigastric region, and percussion revealed an increase of precordial dulness. These troubles as well as the precordial dulness disappeared after a season of repose, but returned as soon as he again un-

[1] Carpenter's Human Physiology, Am. ed., page 241.
[2] Broadbent in Braithwaite's Retrospect, part liv., p. 237.

dertook to climb the Alps. In the night-time he was awakened by an intense dyspnœa and painful palpitations; the precordial dulness was greater than it was before; full inspirations from the open window calmed this oppression.[1]

If, then, it be admitted that there exists a primitive dilatation of the heart, as a result of overtaxing that organ, and if anything which impedes the free return of venous blood to the right heart, may favor such overtaxing of the heart with consequent dilatation, it is plain that pulmonary lesions which are attended with venous stasis in the respiratory organs, and which also affect the chemical constitution of the blood, must powerfully modify the heart's action, and may give rise to all the symptoms of the forced heart. In pulmonary emphysema, chronic bronchitis, and in congested states of the lungs generally, you have all the conditions of such dilatation from forcing of that organ.

Germain Sée, in an interesting chapter in his book on "Diseases of the Heart," shows clearly how renal affections may give rise to various cardiac troubles, and especially to the phenomena of the forced heart. The mechanism of these pathological manifestations has been alluded to in Part I. of this series. "You will," says Prof. Sée, "hear patients complain of shortness of breath, of being oppressed after the least exertion, of having a continual sensation of weight in the precordial region, of the occurrence of sudden violent attacks of palpitation; the pulse is sharp and vibrating, the heart voluminous, the shock of the apex very low down and very strong. You would naturally suspect the existence of some disease of the orifices and cavities, and yet auscultation reveals no abnormal bruit. Under these circumstances you may inquire if you have not here to do with cardiopathy of renal origin, and the existence of polyuria, the presence of a light opalescent cloud of albumen in the urine, the detection at a given moment of Potain's sign, the *bruit de galop*, will help you to a correct diagnosis."[2]

If pulmonary and renal disease may give rise to such symptoms, it is equally true that hepatic and intestinal diseases, attended with capillary-venous stasis may occasion the same pathological condition of the heart, and by the same mechanism as above described.

Nor should the stomach be omitted in this category of causes. I am at present attending a lady who has all the symptoms of the exhausted heart from chronic gastric catarrh. The heart of this patient has long been disturbed in its innervation and nutrition by gastric derangements, and has manifested its suffering by palpitations and decided rhythmical irregularities. There is at present marked passive dilatation of this organ.

Whether all these etiological conditions—overwork, pulmonary, renal, hepatic, gastro-intestinal lesions—may cause not only curable dilatations, but also permanent disorders, such as hypertrophy with endocardial inflammations, followed by valvular incompetency and degenerations of the myocardium; in short, the whole train of symptoms usually referred to primitive valvular disease, is a question which is not yet definitely settled, but to which an affirmative answer seems justified by the observations of Peacock, pertaining to Cornish miners; of Thun and Fraentzel, in the German army; of Myers, in the English army, and of Da Costa, in the American army.[3]

II.—DISORDERED RHYTHM.

As a result of asthenia of the heart's muscle, or impairment of some portion of its nervous mechanism, we have certain disorders of rhythm known as arythmia, intermittences, and palpitations. There is irregularity in the succession of pulsations, or in the duration of certain elements of the cardiac cycle (the *arythmia* of authors); or the action of the heart is regular with now and then an interruption of its pulsations (*intermittences*); or the heart beats tumultuously and rapidly yet with a certain regularity of rhythm (*palpitations*). In palpitations the characteristic feature is *ataxia* rather than *arythmia*, yet they are no less a deviation from the normal rhythm than are the other irregular manifestations of the irritable myocardium.

1. *Arythmia.*—In the normal state the cardiac cycle is composed of the following elements in the following proportions: (a) the systole which comprehends the first part of the cycle; (b) a brief silence which with the diastole comprehends the second third; (c) a pause (the long silence) which occupies the remaining third of the cycle.

Instead of this normal succession with the respective time which belongs to each element of the cycle, the systole may be prolonged so as to occupy one-half instead of one-third of the entire revolution, the diastole and the pauses are then cut short; or it may be abridged in its duration and the diastole may be prolonged, moreover, the length of either of the pauses may be increased or diminished.

In other instances the want of rhythm may pertain to the *succession* of pulsations, which present great irregularity, being broken by pauses or intermissions of greater or less length. The beats may be now slow, now rapid and tumultuous, but their marked feature is irregularity.

The elements of the cardiac pulsation may be increased, the cycle being represented by a double systole or a double diastole, without any other interruption of rhythm. This is called *numerical arythmia.* There is a species of arythmia described by Guttman ("Handbook of Physical Diagnosis," p. 183) as "intermission of the pulse." In observing the pulse, it is noticed that after several regular strokes, one, or sometimes two, are omitted. This is due either to periodical interruption of the heart's action, or to want of power in the heart to send its pulsating throb into the radial arteries. Such an intermittent pulse is doubtless compatible with integrity of the heart and its valves, but it is often the result of mitral stenosis or insufficiency.

Pathogeny of arythmia.—It is when the heart is not in condition to respond to the demand for increase of labor that we note the arythmic pulse. All forms of arythmia are met with in connection with mitral insufficiency, especially that form which is characterized by reduplication of one of the heart sounds, or suppression of the first pause and the diastole. The left ventricle, unable as it were to fill the arteries by one systole, makes two or three partially successful attempts which infringe on the time of the diastole. Heidenhain, who has made an exhausive study of the arythmias, and who has actually produced arythmia in animals by the action of certain toxic agents which disturb arterial tension, considers these irregularities as generated by the intermediation of the nervous system, and as generally depending on irritation of the spinal cord. This irritation modifies arterial tension by affecting the vaso-motors, and embarrasses the heart whose pulsations become disorderly. The first phenomenon is augmentation of tension, which coincides with acceleration of the pulsations, then arythmia ensues, but this does not always appear; in fact, for arythmia to develop, the augmentation of tension must exceed two hundred millimetres by the manometer.

This was shown by some very curious experiments of Heidenhain on curarized animals. This experimenter also observed that in electrizing the divided peripheral ends of the vagus, arythmia was produced.

If an excitation of the spinal cord exceeding a certain intensity may produce arythmia it is easy to understand that the causes which produce such excitation may be multiple, and that they may be toxic, acting through the blood, as when arythmia is produced by tobacco; or they

[1] Clifford Allbutt, cited by G. Sée (*vide* Boston Med. and Surg. Jour., January 4, 1883).
[2] G. Sée: Maladies du Cœur, etc., p. 277.
[3] Croonian Lectures, Lancet. 1865. Myers: Diseases of the Heart among Soldiers, 1870. Da Costa: Irritable Heart, Am. Jour. of Med. Sc., 1871. (See also a complete bibliography cited by Osler in a pamphlet on Over Strain of the Heart, Montreal, 1878.)

may be of reflex order, originating in some disturbance of the gastro-hepatic system, or the uterus; or of the blood-vessels, owing to augmentation of the peripheral resistance. Arythmia is not seldom seen in connection with nephritic disease, with or without hypertrophy of the heart. Lastly mental emotion, by its perturbation of the cardiac intra-cranial and spinal ganglia, may produce arythmia.

2. *Intermittences.*—The action of the heart is regular, except that now and then, and with more or less periodicity, there is a brief suspension. The heart beats normally, only after every four, eight, ten pulsations there is a momentary arrest, when the series of beats is resumed in an orderly manner. After the pause the first pulsation is generally stronger than those that follow, as determined by the finger on the pulse at the wrist and by the sphygmograph. Marey has explained this fact in the following way. By reason of the arrest of the heart the tension augments in the blood-vessels, to overcome which there must be either augmentation in the frequence or the force of the succeeding pulsations. Onimus, by electrizing the pneumogastric nerve with currents much interrupted, succeeded in producing intermittences followed by exaggeration of the force of the pulsations. The causes of intermittence are obscure; when not symptomatic of lesions of the heart they are reflex and are due to gastric or ovarian irritation, etc., or toxic, the result of the abuse of tea, coffee, alcohol, tobacco.[1]

3. *Palpitations; accelerated rhythm.*—It is now generally agreed that palpitations are an evidence of want of power, not of excess of action. They indicate, as J. Milner Fothergill many years ago pointed out, that the heart is laboriously striving to meet the demand made upon it, and that compensation is incomplete.[2]

Germain Sée[3] in his treatise on the anomalous forms of heart disease, defines palpitation as an increase of the activity and not of the energy of the heart. The idea intended to be conveyed is essentially the same as that of Fothergill in his lucid description first published in the *Lancet* in 1870: "The heart, when its integrity is impaired or it is exhausted by effort, *palpitates*, *i.e.*, a laborious evident effort takes the place of the steady normal contraction." A balance has been struck between the weak heart and the systemic forces, the latter having been levelled down to meet the working capacity of the former. Any demand made on the heart for more effort causes palpitations, or even syncope, which are an expression of disturbance of the balance.

In palpitation we have acceleration of the pulsations of the heart which frequently seem diffused over an unusually wide area, without augmentation of its contractile force, as determined by the finger on the pulse and the sphygmograph.

How are we to explain the diffusion of the heart-shock in palpitations? In hypertrophy the heart opposes a larger extent of surface to the chest-walls during systole, and the impulse is strong and heaving and is felt in the arteries, which are distended. But hypertrophy is not commonly associated with palpitations, which are on the contrary a marked symptom of dilatation, whether organic or functional in its origin.[4] In dilatation the heart labors with diminished strength; there is perhaps more vehemence and excitement than in ordinary calm work, but less effective action. Now it seems more than probable that over-distention is an accompaniment of a large part of the cases of palpitation met with in practice.[1] But over-distention is only the precursor of dilatation, and these are but stages in the downward series of degenerative changes which have asthenia for their source.

It may be said that whenever the heart laboriously struggles against an obstacle which it is powerless to overcome, then we have palpitations. Many cases of palpitations in hysteria, with spasm of the systemic vaso-motors, are of this kind.

Palpitations are often connected with displacements which embarrass the heart in its function and overtax its powers. Pleuritic effusions may displace the heart, so may tympanitic distentions of the stomach or colon, by pressing upward the diaphragm and diminishing the working area of the heart. Sée accounts for many of the cases of palpitation of gastric or intestinal origin, whether in dyspeptics or hysterical patients, by such flatulent distention. The tympanitic stomach encroaches on the heart and interferes with its movements. Polysarca may have the same effect.

Severe hemorrhages, by weakening and anæmiating the heart's muscle, may produce palpitations. I see no explanation of these palpitations but that of impaired tone and nutrition in the heart and its motor-energizing ganglia.

That the fundamental condition of palpitations is impairment of tone is apparent from the good effects generally attending the administration of digitalis, convallaria, and other powerful heart tonics—an argument, by the way, on which Fothergill insists.

All causes which anæmiate the heart—insufficient food and exercise, mal-aëration, depressing passions and vices, the abuse of intoxicants, and even tobacco, which interfere with healthful digestion and nutrition, and all other debilitating influences, such as continued fevers and traumatisms, which affect the circulatory system conjointly with the economy generally—are etiologically associated with palpitations. Therefore it is not a matter of surprise that palpitations should be common to the anæmic and chlorotic, to the convalescent who too soon attempts labor, to the emaciated needle-woman whose scanty wages enable her to eke out only a miserable existence, to the inveterate smoker whose dyspeptic stomach digests little food, and even to many tea-drinkers whose meagre slice of toast is washed down by many cups of their favorite beverage.

In these cases of anæmic palpitations there is generally much excitement of the heart's action with a systolic blood-murmur at the base, propagated in the direction of the large arteries. The *bruit de diable* in the jugulars is often very marked. These patients are easily put out of breath. The pathological condition is deficiency of red globules and the nutrition of all the tissues is below par.

But there is another standpoint from which to view the subject—that of the nervous system. There are powerful co-operative factors in states of the intra-cardiac or extra-cardiac ganglia or nerves. As to conditions of the intra-cardiac ganglia in their relation to palpitations, we know nothing.

The vagus, besides being the inhibitory nerve of the heart, contains the vaso-motor and trophic nerves of that organ.[2] While recent investigations have proved that the

[1] M. Decaisne, in a communication addressed to the Académie des Sciences, states that in the course of three years he has met among eighty-eight inveterate smokers twenty-one instances of marked intermittence of the pulse, occurring in men from twenty-seven to forty-two years of age, and not to be explained by organic lesion of the heart. The absence of such lesion or other condition of health capable of inducing intermission of the action of the heart, and the fact that in many of those instances in which the use of tobacco was abandoned the normal action of the organ was restored, M. Decaisne believes will justify him in concluding that in certain subjects the abuse of tobacco may give rise to a condition which may be termed *narcotism of the heart*, characterized by intermission in the movements of that organ and in the pulsations of the radial artery; and that in some cases a suspension or diminution of the practice of smoking is sufficient to cause an entire disappearance of this irregularity.

[2] Palpitation, Its Diagnostic Value. London Lancet, Aug. 6 and 20, 1870.

[3] G. Sée: Diagnostic et Traitement des Maladies du Cœur. Second Edition. Paris, 1882. Also MEDICAL RECORD, vol. xxiv., p. 286.

[4] "Slightly dilated hearts are, as is well known, much more prone to attacks of palpitation than those in the opposite condition of simple hypertrophy. I would here allude to the distinction between palpitation of organic and of inorganic origin, and observe that now and then, perhaps, the surest diagnostic sign between the two conditions is the absence of marked dyspnœa during the paroxysm of functional, and its presence in cases of organic palpitation" (John Cockle, in Lancet, December 24, 1859, p. 636).

[1] I have qualified the above statement, which does not always hold good. There is evidence that some cases of palpitation are dependent on *too great irritability* of the heart-fibre, from loss of blood, inanition, or even toxic agents. The heart beats rapidly and impetuously, though feebly; its action is like the hobbling trot of the jaded horse; it does not even wait for a good diastole before it empties itself of the little blood that its ventricles contain.

It is, moreover, a fact, which Professor Sée has pointed out, that palpitations do not *per se* lead to hypertrophy, as would be the case were they constantly and invariably the concomitant of dilatation. Cases of so-called essential chronic palpitations have been noted where the heart for a series of years has maintained a remarkably accelerated rhythm; the autopsy has disclosed no valvular lesion, no dilatation, no hypertrophy (G. Sée, loc. cit., p. 572).

[2] Brown-Séquard, in maintaining that the par vagum is the true vaso-motor

vagus contains certain accelerator fibres, moderate and careful stimulation of which increases the frequency of the pulsations, it is certain that the ordinary effect of excitation of that nerve is to slow or arrest the heart, and there is no reason to doubt that this is the usual physiological action. By galvanization of the cardiac end of the vagus, then, you may produce arythmia, but you will not be likely to produce palpitations. If, however, you cut this nerve, then something very much resembling palpitations ensues. There is great acceleration of the heart's pulsations, which become tremulous, unequal, and less energetic than in the normal state.[1] Another phenomenon resembling palpitations is noted when in animals this nerve is divided. They become anxious and distressed, and this is strikingly like what we observe in the human subject when suffering from palpitations.

It would seem, then, that experimentally palpitations may be produced by section of the pneumogastric, and this makes it appear probable that the so-called "nervous" palpitations in man may have their origin in paralysis of the vagus. Sée has even gone so far as to account for nearly all palpitations in this way. If powerful emotion may cause palpitations, it is through a paralyzing action on the vagus centre. He appeals to the instance of fear, which causes pallor of the face and coldness of the extremities, by excitation of the vaso-motors; in the same way, he says, the emotion has caused anæmia (by vaso-constriction) of the bulb, and the vagus centre. If tobacco causes palpitations, it is through paralysis by nicotine of the cardiac ganglia of the medulla oblongata. So with tea and coffee. In anæmia and chlorosis the vagus-ganglia are often at fault, and neglect properly to rein up the heart, and the so-called reflex palpitations are distant irritations becoming paralyzing lesions of the pneumogastric.

All this is in the present state of our knowledge largely speculative. What we do know is that palpitation is a phenomenon of asthenia; that it accompanies states of debility, and is often reflex or irritative in its origin,[2] and seems to be dependent on a withholding of the special trophic and energizing influence of the vagus centres. It is certain that no mere irritative or paralyzing lesion of the spinal or sympathetic cardiac centres can *per se* produce palpitations. Von Bezold, Ludwig, and Thiry have indeed proved that excitation of the spinal cord at different heights produces acceleration of the heart's action, but it also increases the energy of the heart; the heart beats faster, but more efficiently. It seems to be almost certain, moreover, that this augmentation of the cardiac contractions is secondary to contraction of the systemic arteries, brought about by stimulation of the vaso-motor centre in the spinal cord.

Increasing knowledge of the causes of palpitations is showing that they are often caused by morbid states of the blood. If the poison of nicotine may produce palpitations by its depressing action on the vagus-centres, perhaps also on the myocardium, so may blood poisoned by bile, or lithic acid. When we know more about lithæmia, now becoming a prominent study among medical men, we shall know more about certain obscure palpitations which have been regarded as "gastric," "nervous," or hypochondriacal in their origin.

III.—CARDIODYNIA.

The heart, though "the most sensitive of the organs of the vegetative life," seldom expresses by pain the difficulties which it experiences in accomplishing its tasks. Any considerable degree of cardiodynia, then, should justify the apprehension that actual gross structural disease exists.

There is now a general consent among pathologists that angina pectoris is an organic, and not a functional disease. The latest researches seem to have established this beyond any reasonable doubt. Dr. Henri Huchard has lately published a series of articles in the *Revue de Medicine* (April, June, August, and September, 1883), in which he shows by an exhaustive *résumé* of the evidence that *true angina pectoris* (Heberden's disease) is due to ischæmia of the heart-muscle, the result of obstruction by calcification or atheroma of the coronary arteries. Other forms of cardiodynia are nervous, reflex, toxic, or diathesic, and are curable—these he calls *false angina pectoris*. The nervous form is that condition of the cardiac mechanism which has its origin in the state of the nervous system accompanying hysteria, neurasthenia, hypochondria, exophthalmic goitre,[1] etc. The reflex form takes its point of departure in some distant irritation, as of the stomach, uterus, etc., which is reflected on the intra-cardiac sensory fibres of the pneumogastric. The toxic form is perhaps oftener caused by tobacco than by any other agent, though cases have been referred to tea, coffee, and alcohol. The diathesic form accompanies rheumatism, gout, syphilis, and diabetes.

Huchard cites the following examples, which show the necessity of a proper diagnosis of these two forms of *angina pectoris*: "In gout we may have thoracic angor under three conditions—(a) either it is a true angina pectoris, arising from an arterial lesion (arterio-sclerosis, atheroma of the coronary arteries, lesions of the aorta, etc.), to which gouty persons are always predisposed; or, (b) gastric troubles, frequent in gouty patients, may provoke attacks of false angina pectoris, which is likely to terminate in cure; or (c) the angina pectoris may be a neuralgic paroxysm, such as gouty neurasthenic invalids are prone to."

In the case of tobacco-poisoning, the same clinical distinction ought to be observed. Tobacco may produce (though rarely) true angina pectoris, by spasm of the coronary arteries, or by favoring real arterial lesions, or, as is oftener the case, false angina by the neuralgic or dyspeptic troubles which it provokes.

These views correspond essentially with those of Professor Sée in the work to which I have so frequently referred.

In a third and final paper I shall take up the clinical aspects of the subject of functional heart diseases.

THE VALUE OF A CAUL.—The following advertisement appeared in one of the daily papers of this city recently: "Wanted—Any person to buy an infant's caul. Call at — Governeur Street, second floor." A reporter of the *Times*, calling at the place, found that the caul was priced at $100! The owners informed him that there was a great demand for cauls among sailors and sea-captains, as it was firmly believed that no one with a caul was ever drowned. A party of interested ladies present informed the inquirer that cauls are more efficacious as remedies for the various ills that flesh is heir to than all the medicines in the drug shops, and declared "if any doctor had a lot of 'em to give people to hold or carry when sick there wouldn't so many die." Several marvellous cures were paraded. One cited a case of paralysis of thirty years' standing, another mentioned a case of inflammatory rheumatism, still another the case of a frightful attack of lockjaw, and, finally, hydrophobia and cholera were added to the list. The reporter heard enough to excite in him the gravest apprehensions for the future welfare of the regular medical profession, especially in view of the incentive to be born with cauls now held out to infants by the present high rates.

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nerve of the coronary arteries, affirms that its irritation causes contraction of these vessels, and thus, by preventing the passage of blood into the cardiac tissue, diminishes the frequency of and ultimately suspends the heart's beat, while on the other hand the section of this nerve, by allowing the coronary arteries to become overfilled with blood, excites the heart to preternatural pulsation. This explanation, simple and plausible as it may seem to be, does not cover the cases of palpitation from anæmia.

[1] G. Sée: loc. cit., p. 156.

[2] The heart may often be remarkably slowed in its action (pulsus tardus). This may be due to intrinsic causes (fatty degeneration, atheroma of the aorta), when it is presumed that there is mechanical irritation of the cardiac branches of the vagus (Guttman). It is, however, often due to extrinsic causes, as in grave disease of the higher nerve-centres, and results from disturbance of the vagus—innervation.

[1] Forms and Treatment of Angina Pectoris. Medical News, October 20, 1883.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

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I.—The External Ear.

GENERAL CONSIDERATIONS.

The external ear.—Inasmuch as the auricle and external auditory canal comprise the external ear in man, they may best be considered together as a whole, both in the study of their functions and in the treatment of the diseases to which they are subject. The auricle and its affections will, however, be more particularly noticed before taking cognizance of the external auditory canal and its diseases, and in certain instances it will be necessary to devote attention to these parts as a whole, their intimate relationship rendering them liable to be attacked by disease at the same time.

The traumatic lesions of the auricle are among those which seldom extend to the cartilaginous portion of the canal of the ear, and in regard to the pinna, or wing of the ear, it may be said topographically to be entirely unlike any other structure of the body; and consisting, as it does, of a delicate cartilaginous framework, occupying a prominently outstanding position, it is very much exposed to injuries from blows, either delivered accidentally, as in boxing and at play, or from falls upon the organ—even lying upon a hard pillow may, especially under favorable conditions to be alluded to further on, set up inflammatory action in the auricle; the injury in either case resulting from the auricle's being more or less forcibly pressed against the hard and unyielding temporal bone.

That the auricle is not more frequently the seat of disease from these causes may create surprise, when it is considered that the perichondrial envelope which everywhere lies in contact with the cartilaginous framework is thus so frequently liable to traumatic lesions, and its consequent separation from the cartilage through inflammatory effusion so sure to immediately follow, as will be seen under *othæmatoma.*

Cutaneous affections.—Injuries, however, by no means constitute the principal part of auricular affections, since the common integument, of which the outermost covering of the external ear consists, is liable to nearly all of the cutaneous affections to which the skin is elsewhere subject. But before proceeding to consider the various affections constituting these two principal divisions, it will be well to first take notice of some general characteristics of the external ear which have a special bearing on diseases of the auricle and its acoustic functions.

FUNCTIONS OF THE EXTERNAL EAR—ITS TOPOGRAPHY, PHYSICAL AND ACOUSTIC FUNCTIONS, COMPARATIVE ANATOMY.

Topographical description.—The pavilion of the ear, as the external ear is sometimes called, varies in size and shape in different individuals; the pinna, or wing, in its general contour is hollowed out like a shell, the *conque* proper being the deepest part and constituting the expansion with which the external auditory canal commences. The inequalities of the auricle's surface, depending on the foldings of the cartilage, while presenting a pretty uniform appearance to the casual observer, are, on close inspection, found to be differently moulded in almost every subject. So characteristically distinct, indeed, has this variation been found to be in individuals, that the remark is said to have been made by an eminent jurist that a photographic view of the ear would better serve for the identification of persons than a picture of the face even—the former not being in the same degree subject to the mutations of time or other changes to which the latter is liable.

The acoustic value of this portion of the ear in man has not been as yet satisfactorily determined; this, however, is not because discussion of the subject has been wanting, and the assertion has been frequently made that excellent hearing may remain after the entire loss of the auricle. It is not strange, therefore, that some writers have considered the auricle as of but little, if any, use whatever as a collector of sound. Thus Itard (1821), in confirmation of this view, relates an instance where a soldier had both of his ears cut off without impairment of hearing, and Hennon (1830), in his work on "Military Surgery," says, "I have met a case where the external ear was completely removed by a cannon-ball, and yet the sense of hearing is as acute as ever." Inferences based on data afforded by cases like the two above cited are, however, by no means to be accepted without question, since there is reason to believe that inadequate tests were employed to ascertain the hearing-power; at least if the voice-test was carefully made the fact is not stated.

Notwithstanding the fact, however, that the loss of the ears does not entail very marked deafness on the sufferer, unless it be in the impairment of the hearing sense in regard to orientation, yet one cannot doubt that the more amply developed, though less becoming, pinna is the more serviceable acoustically, inasmuch as its larger receiving surface favors considerably the collection of sound, and probably also the appreciation of its source. In civilized society, however, the beauty of the ear is considered to depend very much on its small size, and, moreover, the possessors of such enviable adornments are not usually found to be defective in hearing on that account; but many persons moving in the better stations of life are embarrassed by the deformity of illy formed and unsightly ears, and the writer's attention has often been directed to this subject by patients and others; the feasibility of adopting operative procedures for correcting these deformities has been proposed even.

As has been stated above, writers have differed respecting the acoustic functions of the outer ear. Prominent among the older writers who have attached no little importance to the organ may be cited Du Verney (1683), and later Williams (1842) and Pilcher (1842). The observations of the former are of sufficient interest, after the lapse of two hundred years even, to introduce here. He considers the external ear as a natural trumpet, well adapted, from its neat and smooth concavity, to condense sound and consequently render its impressions stronger on the deeper parts of the organ of hearing. This is, he believes, confirmed by the experience of those from whom the external ears have been removed, for they do not hear so well, and use the palm of the hand or a trumpet to remedy the defect. He also adduces the habits of animals, as the deer and hare, as likewise significant—their habit being to turn the ears in the direction from which sound comes in order to hear better. Some persons, he says, believe that sound is reflected from the folds of the auricle before arriving at the concha and that thus intensified their impressions on the transmitting mechanism are increased, "just as in a half circular arch the rays of sound reflecting themselves at equal angles, the length of the circumference of the vault, pass finally from one end to the other by several great and small reflections."

Williams, and subsequently Pilcher, elaborated the previous literature of this subject, and their observations on the size, shape, mobility, and probable use of the auricle in man and in the lower animals, are of considerable interest. Charles H. Burnett (1877) and Rouis (1877) have both of them made researches respecting the acoustic functions of the external ear in man. Burnett concludes that the auricle and external auditory canal constitute a resonator for high notes.

But whatever the sound-condensing or resonating functions of the auricle and external auditory canal may be, these parts exert an important influence on audition in quite another manner. I allude to the direct mechanical

dominance through which elasticity in the drum-head is maintained, in the first place, by means of the cartilaginous framework which is firmly attached to the temporal bone, and, in the second place, through muscular action. Referring to these influences it is readily conceivable that the former aids in retaining the cutaneous layer, which envelops it and constitutes also the outer coating of the drum-head, in a state of proper tension, while its elasticity permits of varying degrees of tension in the drum-head without rupture whenever extra tympanal pressure occurs from either barometrical pressure or from the impact of loud sounds. In respect to the muscular dominance referred to in the second place, it may be said that the aural group of muscles exert a great influence on the transmitting structures, for while the outer integument, lining the external ear, is made to maintain the normal state of tension in the membrana tympani, the underlying fascia of the canal and contiguous parts is, when acted upon by these muscles, capable of increasing its usual tension. Besides the muscles known as aural, there are also certain muscles of the head which may be regarded as auxiliary aural muscles; but of these a fuller account will presently be given.

Impairment of the normal tension of these parts during the progress of inflammatory affections affecting them is quite frequent, and in availing ourselves of the acoustical knowledge to be derived from a study of the above facts, the presence of symptoms otherwise perplexing may be accounted for: thus deafness, tinnitus aurium, and autophanous phenomena, all of which are common in middle-ear affections, may be explained differentially when the outer ear only is the seat of disease. In this connection, let it be borne in mind that in consequence of old age, or from any cause whatever whereby general tone is lessened, the cutaneous layer of the outer ear may suffer relaxation, and that impairment of hearing, tinnitus, etc., may result. Patients thus affected frequently acquire the habit, seemingly almost involuntarily sometimes, of placing the open hand behind the auricle when in the act of listening attentively, and drawing it forward, thereby very much increasing the sound-collecting capacity of the organ, and also putting the parts upon the stretch—conditions which aid hearing considerably. Other patients obtain favorable results by placing the end of a finger in the conque and drawing it outwardly.

Comparative anatomy.—A study of the outer appendages of the hearing organ of some of the lower animals might add to our knowledge of the functions of the human ear. In venturing to offer a most superficial review of the subject, it would be well to state that some of the observations from which the following remarks were drawn were made more for the writer's own amusement and instruction than with any intention of presenting them as the result of strictly scientific enquiry; yet it is to be hoped that suggestions so unimportant as these even may stimulate further research in a department of science where our knowledge, considerable though it be, is still incomplete.

I am led at the outset to institute a comparison in this regard between animals inhabiting aërial and aqueous elements respectively. Thus it will be found that nearly all of the former have an outstanding sound-condensing auricle, while in marine animals this is usually absent. When a transmitting apparatus is found to exist in the latter even, no trumpet-shaped outward collector of sound seems to be required, since the momentum of aqueous undulatory movements is much greater than aërial. In marine animals which make excursions of greater or less duration into the atmospheric air, and are capable of existence in either element, as the whale, alligator, and the like, provisions exist apparently adapted to both aërial and aqueous transmission of sound.

In some crustaceans, however, there seems to be no membranous motor analogous to the drum-head, such as is required in aërial transmission of sound, and hearing, therefore, is probably only complete when the animal is submerged. Scarpa (1795) and Weber (1820), who made researches respecting the hearing sense in these animals, held views differing from the above; they delineate, for example, an osseous and membranous vestibule in the fresh-water crayfish, supplied with an auditory nerve, and in this manner endeavor to explain the perception of sound. I have myself repeatedly dissected the sea-lobster, an animal similar to the river-lobster, with the view of substantiating the theory of the authors above mentioned, and have indeed found a minute nervous filament distributed to the part as described by them, but can scarcely believe it adequate for the needs of this animal, since the optic nerve is of much greater proportions than the so-called auditory nerve, and as regards the vestibules described, I have been unable to demonstrate them satisfactorily. It has occurred to the writer that perhaps the larger antennæ of the lobster are sound-perceivers; they seem well adapted to this purpose, since from their construction they may readily be thrown into vibratory movements. They have a wide range of motion and are easily moved by their own muscles. I have observed the action of this animal while at rest upon the bottom of the sea in shallow water, when the fluid surrounding him was suddenly thrown into vibrations by the blow of an oar upon the bottom of my boat: the larger antennæ were then immediately thrown upward, the better to ascertain, as it seemed, the source of sound. There is still further reason for believing that sound is perceived in this manner, for these antennæ are supplied with nerves of very considerable size, which are given off from the ganglionic centre near the origin of the optic nerves. If these views are correct the hearing sense is but a more highly specialized state of the kindred sense of touch, and much more primitive than in the sound-receiving and transmitting organs which are adapted to respond to the force of the aërial undulations which constitute sound; yet they are sufficient where a highly specialized hearing sense is probably not required.

If attention be now directed to the ears of aërial animals below man in the scale, it will be found on comparison that there exists a striking resemblance, although a very marked difference prevails in the relative size of the external muscles, those of the former being more fully developed. In man, owing to long disuse, they are comparatively rudimentary and useless, since he cannot employ them to move his ears in the same degree enjoyed by such animals, for example, as the horse and dog. In these animals the auricle is loosely attached to the head, and may therefore be more effectively employed in gathering sound in the act of listening, since the largely developed aural muscles can be brought into use in presenting the concavity of the ear in different directions. Having discovered the source of sound the concave surface of the auricle may, on observing the animal, be seen to be offered to it and kept in a more erect state—a position probably most favorable for the collection of sound. In the dog the entire scalp glides freely over the skull, thus facilitating the voluntary movements of the ear.

An opportunity was offered the writer by a friend to examine the ears of his dogs, and in availing himself of this privilege he found that in setters and other dogs where a strain of spaniel prevails, that the drooping ears seemed to afford a natural shield to the deeper and more delicate parts of the organ, which are much exposed in these frequenters of the water and rovers of the field. The cartilage of the pinna, however, is no larger than in breeds carrying their ears erect, being absent in the most pendant part, and that portion composing the commencement of the external auditory canal is much dilated, forming a very large concha, which, when the external ear is in repose, is folded up, thus protecting the ear from the entrance of foreign bodies, etc. When the pendant portion of the auricle is lifted up, so as to afford a better

view of the entrance to the external auditory canal, there are to be seen a number of operculæ, formed from the outer margin of the collapsed walls; one of these, larger than the rest, seems to correspond to the tragus in the human ear. When the animal is on the alert in listening the drooping auricle is lifted up and expanded and the pliant cartilage unfolded, the act being performed by the retrahens aurem and attollens aurem, which muscles together lift the auricle backward and upward with much energy, thus bringing a most efficient sound-collecting trumpet into use. The hearing is possibly further improved in fielding by the constant motion of the dog's head, his ears being thus frequently thrown up, the act giving greater exposure to the concha.

The act of expanding the auricle would seem to also render the drum-head more tense, and per contra, the dog is observed to droop his ears to loud and disagreeable sounds, the drum-head being probably relaxed in this way, while at the same time sound is more completely excluded by the collapse of the cartilage and the overlying and pendant auricle. In this manner more or less complete muffling of the sound-transmitting mechanism takes place, without which the sensitive hearing organ which these animals possess would be liable to injury from loud sounds.

Examples of the peculiar functions of the ear in animals could be multiplied here, for their suggestiveness has undoubtedly a value to the otologist, but I shall allude to but one: It is a well-known fact that the horse when viciously inclined throws his ears far back, an act analogous to that of a desperately angered person who shuts his eyes to the consequences of his own inconsiderate passion, and may be said to blindly rush on to his own destruction; so might one fancy that the horse, by means of this position of the ears, excludes sound to some extent and thus dulls one of the senses through which his submission might be brought about.

The rudimentary state in which the muscles of the ear in man are found has been already alluded to above; the ability to voluntarily move the auricle by them, however, sometimes exists to so great a degree as to be startlingly suggestive of his evolutionary existence; and while the limited muscular movements possessed by him would be totally inadequate for the ear-movements requisite in lower animals, yet the phenomenal accomplishments he is thus sometimes endowed with would seem to point to a not altogether inutile function. I have frequently observed patients draw the ear forward, and more rarely backward or upward, on the introduction of the aural speculum, or a probe or other instrument into the ear; sometimes this wincing is accompanied by tightly closing the eyes and is sufficient to materially impede the introduction of these instruments. Instances of moderate ear-wagging are too frequently observed to be of particular interest; the following, taken from among a large number recorded in my note-books, will, however, serve as an example on which to offer an explanation of the modus operandi of the phenomena and their significance.

Case I.—Joseph C——, aged fourteen, came to the New York Ear Dispensary, in November, 1878, on account of defective hearing arising from chronic purulent inflammation of the middle-ear. During his examination it was observed that he readily pricked up his ears while listening, the auricle presenting well forward. The act seemed to be performed as if to aid the defective sense of hearing, and he was apparently unconscious of the movements made. When requested to move his ears, however, they were moved forward and backward with great ease. The power of moving the ears in the above related case was doubtlessly increased by the constant efforts made in listening.

A much greater amount of ear-movement undoubtedly exists than most persons are themselves conscious of. I have myself often observed the ears of different individuals, when unaware of any observations being made upon them, and have seen the ear elevated by the action of the occipito-frontalis while employed in giving expression to the speaker's emotions; the ear dropping down again to its normal position without voluntary aid.

The following experiment, which was made in my office recently, is of interest in this connection: I observed that a friend with whom I was conversing elevated his eyebrows while listening, by contracting the occipito-frontalis muscle. He stated that the act was usually unconsciously done, but that he fancied it increased the acuteness of his hearing. In order to ascertain if hearing was thus increased, I placed a large vibrating tuning-fork just out of the range of his hearing; if he now promptly elevated the brows the sound of the fork could again be heard, and when the brows were again relaxed he again ceased to hear it; repeated contractions and relaxations of the muscle caused the sound to reach his ears in an interrupted manner, some object seeming to be now and then interposed. The weaker vibrations answered best in the above experiment. My friend, Dr. George B. Pomeroy, of Ohio, informs me that a person known to him always elevates his eyebrows in listening, a habit that often gives offence, since the expression gives the person a supercilious and overbearing expression, as if he doubted what was being said to him. My own observation has been that many persons contract the orbicularis oris when listening intently.

On inquiring into the modus operandi of ear-wagging, as it has somewhat facetiously been termed, it would seem that the power is not alone dependent on the action of the illy-developed muscles of the ear, namely, the attollens aurem and attrahens aurem, but that the orbicularis-oris and occipito-frontalis muscles, acting conjointly, exert a powerful auxillary force in this direction. In most persons the ability exists to bring the last-named muscles sufficiently into action to render tense the fascia in front of and just above the tragus, the motion being perceptible to the touch of one's finger if placed in front of the ear, and when this force is exerted, as it would frequently seem to be, upon that portion of the deep temporal fascia extending down along the anterior margin of the osseous meatus until lost in the anterior ligament of the auricle, the drum-head itself would then be made more tense, especially the more distensible portion, which is directly continuous with the integument of the external auditory canal, and which is known as the *membrana flaccida*. The writer made a dissection of the ear in a recent subject, in order to determine the extent of the motion thus transmissible through the deep temporal fascia to the motor (drum-head) of the transmitting mechanism of the ear. First the deep temporal fascia was dissected up to where it is blended with the anterior ligament of the auricle. At this stage of the proceeding it was found that traction on the deep temporal fascia moved the auricle freely. The anterior attachment of the auricle was then divided, and a section of the petrous bone was made by sawing down through the tympanum from above, separating the incus from the stapes and bisecting the tensor-tympani muscle in its bony canal, leaving the rest of the mechanism of the middle ear intact, with the exception of a slight laceration of the drum-head at its inferior segment. It was now found that if that portion of the tensor tympani left attached to the manubrium mallei was made taut and so retained in the grasp of forceps while traction was made as before on the temporal fascia, which had been dissected up, the transmitting mechanism responded promptly and became more tense than before. When alternate tension and relaxation was practised on the fascia the drum-head tightened and relaxed likewise, the motion being perceptible to the eye.[1] These apparently demonstrable influences of muscular action in the middle ear mechan-

[1] The above dissection and experiments were made with the aid of Dr. S. H. Pinkerton, Assistant to the Chair of Surgery, Bellevue Hospital Medical College, who has promised to make further researches in this direction.

ism in man are similar to those which in a more perfect manner are obtained in the horse, dog, and other animals by means of the voluntary action of their more efficient muscles.

On a previous page allusion has been made to the effect on hearing of alterations in tympanal tension, either through atmospheric pressure from without or within; it can now be seen in this connection that the membrana tympani may have its tension very greatly disturbed by alterations in the tone of the cutaneous lining of the ear, or of the fascia and muscles which have just been mentioned. In this manner an explanation may be found for the variation in hearing experienced by persons who alternately pass their time in the cold, bracing outdoor air, and in warm apartments. When the parts are toned up out of doors hearing is much better, usually, than when they are relaxed by indoor warmth.

With a knowledge of the significance of the relations between the different parts of the external ear and the middle ear mechanism, which I have above attempted to outline, one will certainly find it more easy to establish a differential diagnosis in diseases of any of the parts mentioned.

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OPHTHALMIA NEONATORUM.—Credé, in the *Archiv. für Gynäkologie*, vol. xxi., 2, continues his articles on "The Prophylaxis of Purulent Ophthalmia in the Newborn." He recommends to adopt the following immediately after birth: As soon as the child has been washed, wash the eyes with clean water simply, and then put in a single drop of a two per cent. solution of nitrate of silver. He says he has not seen any unpleasant results from this plan of treatment, and has been able with it to reduce the percentage of cases in hospital practice to as low as 0.2 per cent. Slight congestion of the conjunctiva with moderate swelling occur frequently, but these soon disappear without special treatment within forty-eight hours.

BERIBERI, OR KAKKE.—In the *Louisville Medical News*, Dr. F. H. Enders reports the occurrence of sixty cases of this affection on a Japanese man-of-war that visited the Sandwich Islands. The patients examined after admission to Queen's Hospital, Honolulu, suffered from pain resembling cramp in the calves, œdema of the extremities, marked dyspnœa, had a quick, rapid pulse, high-colored urine scanty in quantity, and constipation. Dr. Trousseau, House Surgeon, put them on a diet of potatoes, fresh meat, lard, and fruit, administered squills digitalis, and nearly all recovered who were taken hospital. As soon as the action of the kidneys ell established by the diuretics, tonics were given. Of the whole number of cases there were thirteen deaths. Dr. Trousseau regards the diet as the cause, it being almost entirely of rice.

HOT VAGINAL INJECTIONS.—Dr. T. Naylor Bradfield, in the *New York Medical Journal*, directs attention to a possible consequence following the long, persistent use of hot-water vaginal injections. He relates a case, that of a girl twenty-three years of age, who had a very large hæmatocele, for which hot carbolized-water injections were repeated two or three times a day, not above 100° F., nor below 90° F., and continued for an hour at each time. Six weeks subsequently the patient complained of increasing numbness on the inner side of the lower extremities, with pain in the knees, constant tingling of the toes, with complete loss of power to stand or walk alone.

EARLY SYMPTOMS OF GENERAL PARALYSIS OF THE INSANE.—In a paper read at the annual meeting of the Massachusetts Medical Society, Dr. W. B. Goldsmith analyzed the initial symptoms recorded in the histories of one hundred cases of general paralysis of the insane, in which he points out the exceptional occurrence at an early stage of the disease of any well-marked characteristics; that physical and mental symptoms usually appear nearly synchronously, the most frequent and characteristic being defective articulation. He also concludes that changes in the pupils and disorders of the gait are less frequent, and have less value in diagnosis, than is usually ascribed to them. He found the patellar tendon reflex to be markedly supra-normal in nearly twenty-five per cent. of general paralytics, the presence of this symptom being of much value in corroborating diagnosis, its absence having, however, no significance. Hallucination, or impaired function of the special senses, is very rare as an early symptom; nor had he noticed in any case the diminution in the sense of smell, thought by Voisin to be very frequent in the early stages. In twenty of his cases the first "motor" symptom consisted in convulsions or loss of consciousness, and he urges the importance of careful inquiry on this head. Among mental symptoms the marked exhilaration, with delusions of wealth and greatness, usually considered to be characteristic, was present early in less than one-fourth of the cases; the more frequent change is simple failure of mental capacity and activity, and mental depression.

PHOSPHATE OF CODEIN.—The *Wiener Med. Blätter* for August 16th contains the mention of a new drug, the phosphate of codein, which has been prepared by Merck, of Darmstadt, under the direction of Professor Hegar, of Freiburg. It is intended for hypodermic injection, for which neither the sulphate nor the chlorate are suitable, being nearly insoluble in water. The new salt is soluble in four parts of water, and contains seventy per cent. of codein. It crystallizes in four-sided columns, and is similar to morphia in action, with the advantage of having less tendency to excite toxic symptoms. It is particularly suitable for sensitive patients.

THE RISKS OF MASSAGE.—Dr. Althaus, in the *British Medical Journal*, says that it is now time to cry "Hands off!" with regard to the indiscriminate manner in which the "Weir-Mitchell treatment" more especially is being applied to all cerebral and spinal cases. Many cases which would be benefited by rest are being treated by means of massage and exercises, so that more harm than good is done to the patient. Dr. Playfair also writes to defend himself from being included among those who carry on the massage treatment in an indiscriminate manner, and points out that massage is only a part, and by no means the most important part, of true treatment, the results of which, in well-selected cases, are so remarkable that it is not surprising that it should run the risk of being at times injudiciously and indiscriminately applied.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 17, 1883.

FRENCH MEDICAL JOURNALS.

WE sometimes have inquiries as to what foreign medical journals an American who wished to keep up his knowledge of European medicine had best take. At the present time, with the great excellence of English and American medical journals, it is hardly necessary for a general practitioner to understand French and German in order to keep abreast of the times. If, however, he is especially interested in some branch of medical science, or if he aspires to be well informed as to the progress of medical science, it is very important that he see French and German literature in the original. For it is probable that in about eighty per cent. of cases translations are emasculating processes.

In beauty of style and clearness of expression French medical writers retain pre-eminence. But this pre-eminence is least strikingly shown in the periodical literature. We venture to say that French medical journals, as a whole, are the worst that are published in any of the leading civilized countries, ranking after those of England, Germany, and America; and hardly, on an average, exceeding in quality those of Italy and Scandinavia.

This poor quality is partly due, no doubt, to their great number. Exchange lists are flooded with a mass of cheap weaklies and monthlies. They have also, as a rule, very little individuality. Most of them are made up of reports of the great Parisian medical societies: Académie de Médicine, Académie des Sciences, Société de Biologie, Société de Chirurgie, Société des Hôpitaux, etc. The last half of all French medical journals is consequently almost precisely alike.

The French journals do not, like those of America, keep *en rapport* with the profession at large. One finds in them no "correspondence," and very few original communications. The original matter consists largely of lectures delivered in some course at the Paris hospitals, or of communications read before a learned society. The young doctor, or the general practitioner, who holds no professorship, and who is a member of no city society, is rarely heard from in the journals. In fact, most of the literary work is done by a few eminent individuals and their pupils, whom we, in this country, would soon learn to look upon as monopolists.

One peculiar and sometimes attractive feature of French medical journalism is the *feuilleton*. This is a department where gossip, anecdote, and light criticism are to be found. The *feuilleton*, however, needs to be well done or it becomes very stupid. In the palmy days of *L'Union Médicale*, under Latour, its *feuilleton* became quite famous, and was frequently quoted. Our French confrères have a fondness for anecdote and *bon-mots*, and several journals devote a space to collecting and presenting literature of this sort—not always of the cleanest kind. It has been said that a French surgeon or physician must make his *mot* in order to make his mark. At any rate French medical writers generally show some evidence of this kind of ambition. Locke has asserted that a man of wit cannot be a man of the best judgment, *ergo* witty men will not make great doctors. This law evidently does apply to France; while as for England and America there has not enough wit appeared for some years to spoil a single doctor.

The French journals have few editorials, and these are not of a powerful character, being generally composed of comments upon the last session of the Académie.

The leading journals of a prominent character are: *Le Progrès Médicale*, which is published once a week, *L'Union Médicale*, *Gazette des Hôpitaux*, and *La France Médicale*. There are several weeklies devoted chiefly to giving reviews of medical progress, together with the usual instalment of society work. Among these are: the *Revue Médicale* and the *Journal de Médecine*. Some of the best of French journals are published monthly *e.g.*, the *Revue de Médecine*, *Revue de Chirurgie*, and the *Archives Generales de Médecine*. There are journals which minister to every possible specialty, but mineral waters and hydrotherapy appear to be particularly rich in journalistic organs. More attention is paid also to therapeutics both in journals and in society work than is done in other countries.

French journals are decidedly narrow in tone, and unenterprising in everything but local matters. Comparatively little attention is paid to other work than that which takes place in Paris. In fine, when contrasted with the modern idea of medical journalism which knows no nation or language, but takes contributions to science from every quarter, French medical journalism is narrow and provincial, and not too scrupulous about advertising proprietary medicines.

PSEUDO-MENINGITIS FROM TEETHING.

To a group of cerebral symptoms, appearing especially in weakly or rachitic children during difficult dentition and subsiding upon the eruption of the teeth, Dr. Guaita gives the name of pseudo-meningitis dentalis. As an example of this affection, he relates the case of a child, twenty-one months of age, who was taken ill with fever, constipation, slight bronchial catarrh, and a single attack of emesis. To these symptoms were soon added somnolence, grinding of the teeth at night, hyperæsthesia, slight strabismus, irregular pulse, the tache cérébrale, but no convulsions. All these symptoms disappeared after eight days, as soon as two upper molar teeth had pierced the reddened and swollen gums. The author regards this disease as of much more frequent occurrence than is generally supposed. During the years 1880 and 1881, 194 children under two years of age were reported to have died of meningitis in Milan. He

thinks that in many of these cases the actual cause of death was the above-described pseudo-meningitis. In the treatment of this disease, which may end fatally in bad or neglected cases, Dr. Guaita advises the relief of constipation by calomel, and the employment of active antiphlogistic and revulsive measures, such as ice-bags, leeches, and blisters.

OPIUM IN COMA.

DR. E. H. HALE, in his treatise on an epidemic fever, commonly called "spotted fever," which prevailed in Maine in 1814, says, page 227: "This was a disease of debility, and of very great debility. The congestions (page 231), including the coma, were produced by debility, as appears from their being effectually removed by stimulants (page 232). Evacuations of every kind invariably increased the tendency to coma, while opium, tonics, and stimulants, cautiously administered, as constantly diminished it (page 143). Opium was by far the most liberally used in cases of coma. Whatever may be the explanation of its mode of action, it is certain that this was a powerful agent in removing the deepest comas, which were not absolutely irrecoverable. For this purpose it was sometimes given in large quantities, both by mouth and by injections (page 121). As the coma came on, the tincture of opium, with some of the strongest volatile oils, such as peppermint or lavender, was given in small doses, frequently repeated (page 122). If these and other measures were not speedily efficacious, enemata, composed of yeast, brandy, and tincture of opium, were thrown up, and the quantity of these articles given by the mouth was rapidly and largely increased. Indeed, the only circumstance by which the exhibition of these articles could be regulated was the effect they produced. No quantity was considered to be large enough, until the coma began to be subdued. When that remitted these medicines were given more sparingly and with greater caution. This effect was uniformly produced by this course of remedies, unless the previous state of exhaustion had been extreme, or some unusual circumstance prevented the requisite quantity from being given."

GLYCERIN DIET IN THE TREATMENT OF FEVERS.

PROFESSOR SEMMOLA, of Naples, has recently made a contribution to the *Bulletin Général de Thérapeutique*, upon the subject of the use of a glycerin diet in acute fevers. Discussing first the subject of *aliments d'épargne*, or those substances which lessen tissue waste, the distinguished professor makes quite a furious onslaught upon the popular practice of prescribing alcohol in fevers. He does not have much faith in the antipyretic action of this remedy. On the other hand he does believe that alcohol always has some toxic action on the bodily tissues, "a toxic action common to it with all the other famous antipyretics, veratrum, digitalis, carbolic acid, etc." Although admitting that alcohol has some claim to belong to the *aliments d'épargne*, he believes that it is likely to cause cerebral, cardiac, and gastric irritation. He has, therefore, abandoned its use as a food ration in the treatment of severe fevers.

Professor Semmola states that for many years he has been casting about for some satisfactory *aliment d'épargne* which does not have the disadvantages of alcohol. He thinks that it has been found at last, glycerin being the substance desired. This he has employed in the following formula:

℞.	Glycerin. pur.....	30	grammes
	Acid citric *vel* tartaric	2	"
	Aquæ	500	"

M.

About an ounce of this is taken every hour, the whole being consumed in the twenty-four hours. Semmola finds it grateful to his patients, and believes that a lower temperature and an amelioration of symptoms occur.

As to its effect upon tissue metamorphosis, his statements are very positive. The amount of urea daily excreted diminishes under the glycerin diet from 6 to 7 grammes on the average (*i.e.*, from 38 to 31 or 32 grammes). Sometimes it falls as much as 10 grammes.

The effect upon the carbonic acid excretion is not stated. Still Semmola asserts that the evidence is positive that glycerin in fevers lessens tissue waste, and is therefore an *aliment d'épargne*.

His views do not correspond entirely with those of several previous observers who have studied the effects of glycerin upon non-febrile subjects.

Lewin and Munk state that glycerin has no effect upon the nutrition of the body or the elimination of urea. Cattillon and Tschirwinsky found that it first diminished and then increased the urea elimination.

A NEW TREATMENT FOR THE CURE OF GLAUCOMA.

A THESIS recently submitted by Dr. A. Trousseau, late hospital interne, presents in a very confident way the claims for a new method of treating glaucoma. This method, which was first conceived by M. Badal, of Bordeaux, consists simply in exposing and stretching the external nasal nerve. This nerve, one of the terminal divisions of the nasal branch of the ophthalmic, contains vaso-motor and reflex-secretory as well as sensory fibres. The nasal or naso-ciliary nerve itself is intimately connected with the visual organ by a branch to the ciliary ganglion and by branches to the ciliary muscle.

Dr. Trousseau admits that the ordinary method of treating glaucoma by iridectomy is a valuable one, and submits the following list of advantages and objections: It often gives excellent results, but sometimes is utterly powerless.

Its chief value is in acute glaucoma, practised early. In the more chronic forms it is useful but not curative. In simple chronic glaucoma it sometimes checks the disease, but often aggravates it. It is dangerous in hemorrhagic glaucoma. The operation has been known to excite a glaucomatous attack in the opposite eye. The operation is not a simple one and is liable to accidents.

Our author sums up also the advantages and disadvantages of sclerotomy in the treatment of glaucoma. It does not, he says, give such constantly good results as iridectomy even, and though beneficial for the relief of the prodromata of glaucoma, its effects are not lasting.

The especial advantages of stretching the external nasal nerve are then enumerated by Dr. Trousseau, who has applied the method in ten cases. He finds that it

at once relieves the terrible pain, diminishes intraocular tension, and increases the acuteness of vision. The operation is a simple one, is liable to no accidents, and if it fails iridectomy can at once be performed. It may prevent the necessity of enucleation or of optic neurotomy.

It is evident that Dr. Trousseau has obtained some good results from his novel operation. If it is really of value, the profession will welcome the fact, since it places a remedy in the hands of the general practitioner and those not especially skilled in ophthalmological surgery.

Glaucoma, however, is a disease that requires prompt action, and cannot be trifled with, and it may well be questioned whether so simple an operation as nerve-stretching will have a permanent effect upon the disease.

THE WORK OF THE GERMAN AND FRENCH CHOLERA COMMISSIONS IN EGYPT.

DR. KOCH has made a report to the Home Secretary of the German Government regarding the work of the commission sent to Egypt to study the cholera. The commission had been in Egypt for about two months when this report, dated September 17th, was made. Its headquarters were at Alexandria, and the investigations were carried out at the Greek Hospital, in that city. Twelve cases of cholera were observed and ten post-mortems made. This is not a very large record, but sufficient opportunity was afforded to make the pathological experiments desired. The blood, the vomit, the dejections, and the viscera were carefully examined. Few micro-organisms were observed, except in the dejections and in the intestinal wall. Cultivations of the organisms found here were made, by the gelatine method; and mice, fowls, dogs, and monkeys were inoculated with them. These animals were also fed with specimens of blood, vomit, secretions, etc. In no case was anything resembling true cholera produced.

The organisms found in the dejecta were of the kind previously observed by other investigators, viz., micrococci, bacteria of putrefaction, etc. They did not seem to possess any special pathogenic or anatomical peculiarities. In the intestinal wall, however, there was found in great abundance a bacillus which claimed more attention. It existed in great abundance, and was found in every case examined except one, that of a man who had died from one of the sequelæ of cholera after having survived the direct attack. In cases where the intestine showed gross anatomical changes the bacilli had penetrated the follicles of Lieberkühn, and caused evident irritation. In some places they had accumulated between the glandular epithelium and the basement membrane. In the very severe cases they even penetrated into the submucous tissues. The lower part of the small intestine was particularly affected by the bacilli. They are described as being rod-shaped and resembling the bacilli of glanders. Koch was particularly interested in these organisms, because he had already a year before seen similar ones in specimens of intestine from four cases of cholera occurring in India. These specimens had been sent him for examination; but he had not, at the time, been able to draw any conclusions regarding them. Having found them again, however, he proceeded at once to make cultivations and inoculations. His results were, however, as we have said, entirely negative. In a word, therefore, the investigations of Koch and his party have as yet thrown no new light upon the pathology of cholera. The germs described are much like those occurring in ordinary conditions of putrefaction. It has been suggested that since the intestinal wall, in the latter stages of cholera, becomes greatly reduced in vitality the bacteria might easily pass into it at that time, just as organisms of putrefaction usually pass into dead tissue.

On the other hand, Dr. Koch thinks that the research is not yet ended. The cases of cholera from which he obtained his specimens, occurred toward the latter end of the epidemic, when the specific virus, and presumably the bacillus, had lost much of its virulence. Hence the failure of the inoculations. Again, this failure may have been due to the fact that the lower animals experimented upon are not susceptible to cholera affection at all. In order to clear up these and other points, Koch has asked permission to be sent to India, where he can continue his studies. This permission, we are glad to say, has been granted.

Cholera is a disease which, from analogy, one could easily believe was due to the presence of a pathogenic organism. Science is to be congratulated that so competent an investigator as Dr. Koch is enabled to continue his search for it.

The French cholera commission has not yet, so far as we can learn, made its official report. According to unofficial statements, however, this commission has also found an organism, and has cultivated and inoculated it. The results, however, like those of Koch, have been negative.

CAN CANCER OF THE PENIS BE ACQUIRED BY INOCULATION FROM CANCER OF THE CERVIX UTERI?

CONSIDERABLE comment has been aroused, and naturally, by the statement of Dr. T. G. Thomas, in a clinical lecture recently delivered, that there was a serious danger of contracting cancer of the penis by sexual intercourse with women suffering from uterine cancer. Dr. Thomas asserted that "repeated instances of cancer being contracted in this way were on record." And he always warned the husbands of women suffering from this disease against the danger to which they might subject themselves.

In a subsequent letter to the *Weekly Medical Review*, Dr. Thomas modifies his first statements very much. He writes: "If in the heat of a clinical lecture I should have stated the matter so strongly, I desire to modify my assertions, for I cannot sustain them, either from personal experience or a knowledge of the experience of others. I have met with but one case of cancer of the penis which I thought had this origin and I have not at my disposal evidence of the frequency of this disease after such exposure in the practice of others. I always guard husbands from exposing themselves to the danger of sexual intercourse where uterine cancer exists, and from *a priori* reasoning should look upon the danger of infection where an abrasion existed near the frenum as one which should be always guarded against."

Meanwhile Dr. Paul F. Mundé has been investigating this subject, and presents the results in the *New York*

Medical Journal of October 27th. This gentleman, never having met a case of this kind himself, wrote letters of inquiry to Drs. T. E. Satterthwaite, W. H. Welch, and R. F. Weir, of this city, also to Dr. Zerny, of Heidelberg, and Th. Billroth, of Vienna. From all these gentlemen the answers were that in their experience they had met with no case of cancer of the penis which had been acquired by local contagion in sexual intercourse. The opinion was general that cancer, in all probability, was not transmitted in that way, although the *possibility* of the occurrence could not be entirely denied. Experiments made to test the question of the inoculability of cancer have almost always been failures. Langenbeck injected fresh cancerous material into the femoral vein of a dog, and, a few months later, found some small cancerous nodules in the lungs. But Dr. Welch quotes Virchow as saying that these nodules resembled primary cancer. Dr. D'Outrelepont made experiments which were entirely negative, while Nowinsky claims to have produced two small growths out of forty-two otherwise unsuccessful inoculations. Demarquay, in an analysis of one hundred and thirty-four cases of cancer of the penis, found one in which the cause given was a local contagion. This author does not believe, however, that cancer of the penis is ever really contracted in this way. Dr. Welch quotes Langenbeck as saying that he had seen three or four cases caused by local contagion.

Both Zerny and Dr. Mundé refer to the fact that cancer of the finger has never been contracted, so far as is known, by physicians or nurses whose work obliges them to make frequent digital examinations of cancerous cervices.

The interesting evidence thus collected by Dr. Mundé tends to show that there is very little if any danger of contracting cancer by sexual intercourse. No case indisputably illustrating this mode of origin appears yet to have been reported—unless Langenbeck has recently published those that he claims to have seen.

The evidence is by no means all in, however, and as few deny the *possibility* of local contagion, it is to be hoped that clinical researches regarding this important matter will continue.

News of the Week.

THE DEATH OF PROFESSOR DEPAUL, of Paris, is announced. Professor Depaul was well known for his contributions to obstetrical science, and to pædiatrics. He was a member, and at one time president, of the Académie de Médecine.

LARYNGEAL CHOREA.—This is so rare an affection that a writer in an English medical journal recently expressed doubt of its existence. Curiously enough, three cases have recently been reported almost simultaneously: two by M. Blachez to the Académie de Médecine, and one by Dr. H. D. Chapin, to the Neurological Society in this city.

SUICIDES BY TWO MEDICAL MEN.—The profession of London have been shocked by the suicide of two medical men, both committed under very sad circumstances. The first was that of a native of Afghanistan, Mahomet Ismal Khan by name, who came to England some few years ago, and, after studying for the usual period at University College Hospital, qualified as member of the Royal College of Surgeons of England, and Licentiate of the Royal College of Physicians of London. Having qualified, his troubles began. He had spent all his capital in obtaining his qualifications, and it was necessary that he should do something for a livelihood; but his extraction and color were against him, and, to his intense disappointment, he found that he could not obtain employment in the profession he had adopted without descending to practices both degrading and illegal; and, in a fit of despair, he committed suicide by swallowing a large dose of prussic acid.

The other case of suicide was equally sad. It was that of Dr. Dalton A. Haffenden, of Kensington, who was charged at the Hammersmith Police Court with being concerned in procuring abortion. At an adjourned hearing, it was announced that the doctor had committed suicide that morning by swallowing poison. He left behind him a letter, in which he declared his innocence of the charge.

THE STUDENTS MEDICAL UNION CLUB, of London, seems to be a failure.

THE PITTSBURGH MEDICAL JOURNAL will suspend publication for the present, after its next issue. The senior editor, Dr. T. J. Gallaher, contemplates a trip to Europe. This journal has been edited with more than usual ability.

SYPHILITIC INOCULATION OF MONKEYS.—At a recent meeting of the Société Médicale des Hôpitaux, Dr. Martineau announced that the monkey he inoculated on November 16, 1882, with syphilitic matter from a patient of his, after having presented the characteristic lesions—hard chancre, followed by the various syphilides (papulo-erosive)—became affected ten months after inoculation with ulcerous syphilide of the mucous membrane of the palate, which has healed. This case is interesting in so far as it proves that the evolution of syphilis in this monkey is following the usual course observed in man, and will tend to affect the theories in vogue respecting the natural history and origin of syphilis.

CONVICTED OF GRAVE-ROBBERY.—Last spring the grave of Edwin R. Harmon, formerly a prominent resident of Camillus, N. Y., was found to have been opened and the body stolen. The body was subsequently discovered in the dissecting-room of the Syracuse Medical College. Henry Thomson, formerly a medical student and a graduate of Syracuse University, was arrested for robbing the grave. His trial was concluded November 10th, and, after remaining out all night, the jury rendered a verdict of guilty.

DR. JOHN MCNEIL, an old and respected citizen of Jersey City, and one of the Commissioners of the County Board of Health, died at his home in that city on November 9th. During the war he was Surgeon of the Twenty-first New Jersey Volunteers.

THE END OF A CURIOUS CAREER.—Edward Borke, a well-known figure in connection with the Morgue in this city, died at Bellevue Hospital last week. Borke was a person who had probably handled more corpses than any

man in the world. The number of corpses in the Morgue each year approximates 5,000, and Borke handled every one entering or leaving it when he was on duty—in short, since his connection with the hospital he has moved at least 50,000 dead bodies. He had never followed any other calling but brick-making. The circumstances which led to his uncanny occupation arose in 1870. In that year he was brought to the hospital as a patient, and, although he improved rapidly, he never fully recovered. Being without home or friends he was allowed to remain at the hospital, and since has been in attendance at the Morgue and assisted at thousands of post-mortem examinations. Borke was not a man of tender susceptibilities, but he did his work faithfully, and had no bad vices. He was a very quiet man, and had little to say to strangers. His pet and most particular abhorrence was a newspaper reporter. For this portion of the community he held the most profound contempt, and could not disguise his wonder that any one in Bellevue Hospital should condescend to give them any information whatever. This dislike blossomed out, so the attendants at the Morgue say, after a reporter, who is now dead, had made Borke the central figure in a newspaper article, and compared him with Dickens's worthy, Jeremiah Crutcher. Borke read the article the following morning, and although he was ignorant of who Jeremiah was, he understood that he had been caricatured. He was wild with rage, and swore eternal enmity to the entire tribe of reporters, and kept it up.

The City School-Houses.—The Sanitary Inspectors of the city report that in many school-houses in this city the air is poisoned by bad drainage, defective plumbing, and insufficient ventilation. At a recent meeting of the Medico-Legal Society, it was stated that in two years 3,000 school children have lost their lives because of the foul and poisonous air which they have been compelled to breathe. The facts discovered by inspection are known to the Commissioners of Education, and there should be no delay in applying the proper remedy.

A Daily Medical Journal.—Some enterprising parties in Paris have started a daily medical journal. It is called *Journal Medical Quotidien.* There are already two tri-weekly medical journals in that city; most of the journals, however, issue bi-weekly.

Artificially Colored Meat.—Several persons in Berlin were recently attacked with symptoms of poisoning after eating some beef which had a beautiful red color. It was discovered that the man from whom the meat was bought had colored it with aniline.

Improvements in Mount Sinai Hospital.—During the past eighteen months several improvements have been made in this hospital. There have been erected eye and ear infirmaries and an isolated building for cases of contagious disease. The inner walls of the main building have been renewed to guard against danger from the absorption of contagion by the walls. The cost of these improvements is about sixty thousand dollars.

A Second Clinical Chair in Ophthalmology has been organized in connection with the Vienna University and General Hospital. Dr. Ed. Ritter Gäger v. Jaxtthal has been appointed ordinary professor.

The Chair of Anatomy in Dublin University has recently been filled by the appointment of Dr. Cunningham.

The Eleventh Annual Meeting of the American Public Health Association met in Detroit, Mich., November 13, 14, and 15, 1883. Dr. Ezra M. Hunt, of Trenton, N. J., was in the chair. A large number of new members were elected. Dr. D. E. Salmon, of Washington, read a paper on "Texas Cattle Fever." He gave a history of the disease. The malady does not spread from herd to herd, but is taken by those cattle which cross the trail of the infected ones. He felt sure that climate changes had little to do with the spread of the disease. Contagion always comes from infected pasturage, not from actual contact. The disease is never seen at the North, except where cattle from infected districts in the South have been put in the pastures. Dr. Hillare Ryan, of Caldwell, Tex., said he had lived in and near the infected district in that State nearly all his life. He had noticed that shrewd cattle-buyers would never purchase yearlings from the portion of the State referred to by Dr. Salmon.

Dr. J. M. Partridge, of South Bend, Ind., read a paper on the swine plague. This disease, generally known as the hog-cholera, first appeared in 1860, and its ravages were so frightful that the loss among the swine was greater than among all other classes of animals, being largest among the great corn and pork producing regions of the Northwest. The disease was the same wherever found. Some rather successful experiments with inoculation had been made, but it was thought best that the disease should be perpetuated instead of being exterminated. He recommended giving ten drops of carbolic acid for every one hundred pounds weight of the animal three times a day, and thorough disinfection of the pens with the same acid. Healthy animals should be separated from those diseased and removed to fresh pastures.

Surgeon George M. Sternberg, United States Army, read a paper on the "Etiology of Malaria." He doubted very much whether malarial disease was caused by the presence of parasites called bacteria in the blood. He thought it well established, however, that living microorganisms were intimately connected with the presence of malaria. Tables were presented showing the number of cases of malarial disease at line posts along the Atlantic sea-board and at another line along the Mississippi and Missouri Rivers. Heat, moisture, and vegetable decomposition were essential features of malaria. Dr. Sternberg agreed with this proposition quite generally, but he also stated that the low state of the system was often, if not always, necessary for malaria to take effect. On the question of heat attention was called to the tables, which showed that the percentage of malarial diseases was much greater in Southern latitudes than at the North.

Following in the same line was a paper prepared by A. L. Woodhull, Surgeon, United States Army, on "Etiological Association of Organic Matter with Malaria." He thought it probable that the decomposition of organic matter—mainly vegetable—was the root of the evil. More directly he thought the causes were impure air and water and personal neglect of hygienic laws. Thorough drainage, he said, often prevented the spread

of periodic fevers. Dr. Clark Bell, of New York, said his experience had been that stagnant water, containing decomposed vegetable matter, was sure to produce malaria. He believed that malarial poison never crossed a very broad stream of water or a very wide expanse of sea. The theory he advanced for this was that water absorbed poison. Dr. George H. Rohe, of Baltimore, said malaria was not so dangerous in stagnant water as after the water had partially dried up.

Surgeon Charles Smart, United States Army, read a paper on the prevention of malarial diseases. With others he attributed the cause chiefly to impure drinking-water containing decaying vegetable matter.

At the evening session Governor Begole made an address of welcome on behalf of the State to the Association; Dr. William Brodie, of Detroit, on behalf of the city, and Dr. John Avery, President of the State Board of Health, on behalf of that body. The annual address by the President of the Association followed, consisting of a review of the work of the Association for the past eleven years. Social festivities followed.

Reviews and Notices.

A Guide to American Medical Students in Europe. By Henry Hun, M.D. New York: Wm. Wood & Co. 1883.

The object of this book is "to furnish information about the different universities of Europe, and about the way in which medicine is taught abroad." After an introduction, containing a number of useful suggestions about methods of travel, and the manner and expense of living, the writer takes up the subject of medical study in Austria, Germany, France, and England, giving some space to each university in these countries. His preference for Vienna will be shared by all who have studied abroad recently. The well-known professors there, the numerous private courses given by their assistants in every branch of medicine, and the admirable facilities for the observation of patients in the great General Hospital are described in a way which indicates that the writer is a careful observer as well as a keen student. Several changes have occurred in Vienna of late which are not noticed, but as a whole this chapter will be found by the student full of valuable suggestions. The advantage to the student of obstetrics of arriving in Vienna during a vacation, when he can practice in the wards constantly without being disturbrd by a crowd, should have been mentioned. The excellence of Heidelberg and Strasbourg as places for pathological work is noticed; but the writer hardly does justice to Berlin and Leipzig, which are really the great medical centres of Germany, and in which laboratory work in physiology, histology, and pathology can be done to great advantage. Paris has lost the place of pre-eminence which she held thirty years ago, when the present Nestors of American medicine were students. In one respect she is still in the front rank, viz., in anatomy, and the perfect facilities for work in the École Pratique, under M. Farabœuf and his numerous assistants, deserves a more extended notice than is given by Dr. Hun. The possibility of doing much satisfactory clinical study in neurology with Charcot, Magnan, and Legrand du Saulle, if one can secure an introduction to these gentlemen, is also passed by. The list of hospitals, with their location and hours of clinics will be of great service to the stranger. The chapter on England is simply a reprint of the student's number of the London *Medical Record*. It is undoubtedly a fact that Americans can study to better advantage on the Continent, where the chief end of hospitals is medical instruction. But the opportunities for special work in London are very great. In gynecology or in surgery, for example, one can employ every hour in the week by attending the various hospitals and dispensaries, and is sure to receive a kind reception and some personal attention.

If a little more space had been given to a description of the methods of some of the prominent teachers; to pen-pictures of the great clinics of Nothnagel, Leyden, G. Sée, or Charcot, and to some details regarding the peculiar facilities for hospital work on the Continent, the book would have gained in general interest. No medical student starting for Europe should omit to take a copy. A thicker volume, somewhat smaller and of square shape, would have been more convenient to carry in the pocket.

The International Encyclopædia of Surgery. Edited by John Ashhurst, Jr., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and woodcuts. Vol. III. New York: W. Wood & Co. 1883.

In the preface of this, the third volume of the Encyclopædia, its able editor expresses his confidence that it will fully sustain the high reputation already earned by its predecessors. That Dr. Ashhurst has not misplaced his confidence a careful examination of the book before us shows. Nor, in thus proclaiming his own faith regarding the value of his labors and that of his colleagues, has he, in our opinion, set aside any of that modesty which should always distinguish the editor of a large and important work.

With so little room for fault-finding, the task of the reviewer is naturally reduced to the simple one of presenting a brief analysis of the contents of the volume before him. Dr. Conner is the author of the first article, which is devoted to a consideration of the comparatively rare injuries and diseases of the muscles, tendons, and fasciæ. He writes in a terse way, and has happily omitted all superfluous details that sometimes mar the more elaborate chapters. The injuries and surgical diseases of the lymphatics are very ably treated by Dr. Bellamy, of the Charing Cross Hospital, London. In the third article, from the pen of the late Dr. John A. Lidell, we find an exhaustive and, at the same time, thoroughly practical account of the various injuries of the blood-vessels. This is followed by Dr. Wyeth's essay on "Surgical Diseases of the Vascular System." It is always pleasant to have to record the originality of an author's work; yet, perhaps, in a standard international work like the present the results of personal labors and individual convictions might have received rather less prominence than is here accorded them. The detailed enunciation of certain matters, more particularly some relating to histological changes, would more fittingly be found in some current medical periodical. Barring this slight fault, however, which one is the more ready to excuse on account of the intrinsic merit of his observations, Dr. Wyeth's article must be classed as among the best in the book.

Aneurism is next considered, and a better exposition of an important and difficult subject it has rarely been our pleasure to read. Dr. Richard Barwell, the author of this article, may well be congratulated upon the masterly manner in which he has acquitted himself of no easy charge.

Dr. Nicaise, of Paris, gives us a good account of the injuries and diseases of nerves. It leaves nothing to be desired in point of completeness and as regards the practical manner with which the subject is handled.

The concluding article is on the injuries of the joints, including dislocation, sprains, contusions, and the various kinds of articular wounds. It is by Dr. Andrews, of Chicago, and very aptly closes an excellent volume. The success of the Encyclopædia is now assured.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, NEW YORK.

SURGICAL SERVICE OF DR. GEORGE F. SHRADY.

(Reported by H. B. McCARROLL, M.D., House Surgeon.)

REPORTS OF PRACTICE AND PECULIARITIES OF TREATMENT.

IN a large metropolitan hospital with an active ambulance service the cases of acute surgery are quite numerous and varied, and are proportionately interesting and instructive. The Presbyterian Hospital has during the past few months been no exception to this rule. In fact, during this period the surgical wards have been crowded to overflowing with patients presenting almost every variety of injury. Reference is made to a few of these in a cursory manner for the purpose of illustrating the methods of treatment for some common forms of accident.

THE TREATMENT OF TRAUMATIC HEMORRHAGE.

As a rule, in all cases of traumatic hemorrhage the vessels are tied in the wound. There is an exception to this in scalp wounds, the bleeding from which is almost always controlled by firm compression. In securing vessels in an incised wound it is always considered wise, unless a vessel is only partly cut across, to limit operative procedures to mere ligation of visible bleeding points. In punctured wounds the contrary holds good, for when compression fails it is imperative either to enlarge the opening, tying both ends of the divided vessel in the wound, or to ligate the vessel higher up. In cases of hemorrhage attending compound fracture, where a main artery is not wounded, well graduated compression suffices. It has not been found necessary to depart from this rule in any of the cases of compound fracture treated during the present term of service. The most troublesome hemorrhages have been those due to incised wounds of the palmar arch. In all it has been found necessary to ligate the vessels in the wound. The manner of doing this may be illustrated by the following case:

G. V——, a milkman, aged twenty-two, while serving his customers fell forward, striking the palm of his left hand upon a broken bottle. The wound was situated about an inch and a half in front of the flexure of the wrist, and extended across that part of the palm, severing all the soft parts. The bleeding was at once very profuse. He ran to the neighboring police station, and the hospital ambulance was summoned. Bleeding was temporarily controlled by firm pressure and bandage. Soon after his admission Dr. Shrady applied an elastic bandage up the arm and an elastic tourniquet to brachial. The dressings were then removed. The main sources of the hemorrhage were, however, hidden in the deeper portions of the cut. The tourniquet was then loosened and the bleeding points seized in the following manner: A tenaculum was passed under a bleeding mass. Through the substance of this mass, behind the curve of the tenaculum and at right angles with it, was inserted a double ligature which was made to secure both halves of the included portion. By this method there is less danger of the slipping of the ligatures. As both palmar arches were involved it was necessary to apply three or four such ligatures. The wound was dressed as an open one, with carbolized oil, and is fast closing up.

LIGATION OF BRACHIAL ARTERY FOR TRAUMATIC INTERSTITIAL HEMORRHAGE.

Two cases were treated in the hospital recently which illustrate still another method of arresting traumatic hemorrhage. In both of these the respective arteries were punctured, and the blood escaped in the deeper tissues of the limb, forming an interstitial aneurism.

George K——, aged thirty-five, was welding steel by a steam hammer, when a small shivered piece of the steel struck him on the inner side of the left arm at the bend of the elbow. A profuse hemorrhage which spurted through this small wound was temporarily controlled by a physician who saw the patient immediately after the injury. The patient had repeated seizures of hemorrhage at intervals of every two or three days for a week. At the end of that period he sought admission to the hospital in an almost exsanguinated condition.

Within a few hours after admission the blood found its way through the compresses. The dressings were promptly renewed, and the alarming hemorrhage which showed itself was promptly controlled by renewed pressure. Dr. Shrady was then summoned to the hospital, when it was decided to expose the bleeding point and ligate. The patient was etherized, an elastic bandage applied on hand, forearm, and arm up to the middle of the latter, where an elastic tourniquet controlled the brachial artery. After the removal of the bandage a free longitudinal incision was made at the bend of the elbow, opening up a large cavity filled with a clot and exposing the inner margin of the tendon of the biceps and the triangular space between the supinator longus and pronator radii teres muscles. The parts were already extensively dissected by the effused blood. After careful search an opening was discovered across and half way through the brachial artery at the flexure of the elbow. The vessel was tied on both sides of this wound with carbolized silk, and the intervening portion divided. The hemorrhage was then found to have been arrested, and the wound was dressed by the open method. The patient made a prompt and satisfactory recovery.

LIGATURE OF ANTERIOR INTEROSSEOUS ARTERY FOR CIRCUMSCRIBED INTERSTITIAL HEMORRHAGE.

The following is the history of a second case of traumatic hemorrhage illustrating the same general plan of treatment:

E. M——, a lad aged sixteen years, was brought to the hospital by Dr. Curtis, of Hawley, Pa., with a swelling of the middle of the left forearm following a punctured wound accidentally inflicted by the blade of a pocket-knife. The injury was received two months before and was followed at the time by quite profuse bleeding. Dr. Curtis enlarged the opening and secured what appeared to be the bleeding point. At all events the hemorrhage was thereby arrested and the parts in time nearly healed. Two weeks before admission and during a convalescence from measles an interstitial hemorrhage declared itself in the shape of a pronounced circumscribed swelling, the size of an orange, in the site of the original puncture.

On admission to the hospital the left forearm was found considerably swollen, and the thumb and fingers semiflexed. The latter condition was thought to be due partly to pressure upon the median nerve by the clot and partly by surrounding inflammatory processes.

After the usual precautions the parts were exposed by a free longitudinal incision over the swelling and the clots were turned out. In the layer of the deep flexors and in the sulcus between the flexor longus pollicis and flexor profundus digitorum muscles was a matted cord of tissue including the median nerve and the wounded vessel. The anatomical relations of the parts were somewhat disturbed by the dissecting blood-clot, but the artery ligated was believed to be, from its situation, the anterior interosseous. The wound was dressed by the open method, and passive motion applied to the fingers. In three weeks the boy returned to his home in Hawley, Pa., with the wound healed and with good use of his fingers.

CONCERNING THE ELASTIC TOURNIQUET.

The elastic tourniquet and bandage are used almost exclusively in this hospital for the purpose of controlling hemorrhage of the extremities, and entirely replaces

Petit's tourniquet, even where amputation is to be performed.

HOT WATER AS A HÆMOSTATIC.

In cases of persistent venous oozing from the surface of wounds, hot water, 120° F., is quite frequently employed, with very satisfactory results. This is generally applied by means of saturated sponges held against the part.

Reports of Societies.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of October 12, 1883.

WILLIAM J. MORTON, M.D., PRESIDENT, IN THE CHAIR.

DR. LEONARD WEBER read a paper on

THE NEUROTIC ORIGIN OF PROGRESSIVE ARTHRITIS DEFORMANS.

Having briefly recapitulated the symptomatology and etiology of arthritis deformans, the reader proceeded to develop his personal views concerning the nature of the disease in question.

He said that among the comparatively large number of cases of arthritis deformans which he had seen in the course of the last twenty years, he could not but recognize in sorrow and grief, fright, irritation and exhaustion of nerve centres by sexual indulgence, and the leading of a dissolute life, factors just as potent in producing the disease as rheumatic influences, if not more so. Again, remembering the symmetrical appearance and progress of the disease in most cases, no more plausible explanation seemed possible than the supposition of causes located in the central nervous system. The neuralgic and tropho-neurotic symptoms also supported this view, though it was not to be forgotten that in a spine stiff and deformed by arthritis there might easily occur changes of innervation, producing neuralgias and tropho-neurotic changes secondary in character. Finally, the negative results which he had had in treating polyarthritis deformans after the usual anti-rheumatic method, with iodides, colchicum, etc., and on the other hand, the very positive results obtained in similar cases by the galvanic treatment of the central nervous system, combined with a generous diet and the persistent administration of cod-liver oil and iron, led him to believe in the neurotic origin of the disease in many cases. It was through the failure of the old method that he first became convinced of the erroneousness of the conventional opinion of the rheumatic or gouty origin of this formidable malady. Up to the present no autopsies had been made with reference to the condition of the nerve-centres in this disease, and it would be a fit subject for future research to find changes in the cord, presumably in the anterior horns, which might induce certain forms of arthritis deformans.

With regard to the main features of the disease, he had this to say: as a rule, it began and developed very slowly, without any other symptoms at first but pains in one or more joints, which came and went either spontaneously or after exertion. Not infrequently the patient complained at this early stage of an unusually tired feeling in the joints. The pains were neuralgic in character, circumscribed or diffused through the limb. In the peripheral form the joints of both hands and feet, in the central variety the hip, knee, and spine, were the parts affected. In the course of time a great deal of stiffness and discomfort was experienced. The joints enlarged and became unshapely by the proliferation of hard, osseous protuberances on the outer surface of the swollen epiphyses, and creaking or cracking in moving or palpating the joints was perceptible to the patient as well as the physician. The adjacent soft parts, particularly the muscles, showed in a comparatively early stage of the disease a degree of atrophy not at all commensurate with their passive condition alone, but much more due to peculiar nutritive changes of neurotic or myotic origin.

In the peripheral form the disease affected the joints almost symmetrically on both sides; in the central form the advance was irregular. In one case he had seen it remain stationary in the hip-joint for many years, but attacking some joints of the fingers and toes at last. In another case, a female patient, about thirty-five years of age, the upper part of the body only was affected. He has now a case under observation where nearly all the joints on the body were badly affected when he first saw the patient, who had been a helpless cripple for many months. The disorganization of the shoulder, keee, and particularly the hip-joint, lead often to a considerable shortening. In one of his cases, still under observation, the shortening of the one lower limb amounted to nearly three inches.

In the spinal vertebræ ankylosis was more quickly developed by the disease than in other parts of the body. One of his patients could neither bend nor turn her head when he first saw her, the entire spine being stiff, but there were no symptoms of compression or even remarkable irritation of the cord. The disease was slowly but steadily progressive; while it might remain stationary for a length of time, exacerbations were sure to follow. Fever or other great constitutional disturbances he had not noticed in its course. In a female patient, aged thirty-seven, he found the urine to have a specific gravity of 1.026, containing some sugar, and phosphates in abundance. Her mother had diabetes and was a sufferer from arthritis deformans at the same time.

The following cases were selected from his records as illustrative of the points he wished to bring out:

CASE I.—Mrs. M——, aged forty-seven; American; no syphilitic or hereditary taint, but a sister is reported to be sufferer from chronic rheumatism. Married early in life, went on the stage, and as a somewhat prominent actress led an active and varied life, experienced many changes of fortune, travelled a good deal, and never hesitated to expose herself to wind and weather, yet always enjoyed good health until two and a half years ago, when, after a premonitory period of worry and depression of spirits by the loss of the last piece of property she owned, she experienced pains in both wrists and elbow-joints, followed by swelling and distortion of the same. Hands and feet soon followed, and when I saw her first on February 27, 1883, she had not a joint that did not creak or crack or was not out of shape, except those of the clavicle and the lower jaw. The knees and spinal vertebræ were in the worst condition and the most painful. Standing or walking, even with support, was out of the question. Her urine contained phosphorus, no albumen. Sleep and general nutrition bad; bowels irregular. No treatment had so far done any good, but the disease had made rapid and steady progress. Ordered to take of propylamin (trimethylamin) 3 j., aqu. ℥ viij., oleosacch. citr. 3 j., a tablespoonful ter in die before, and two pills ferr. sulph. and potass. carbon. after each meal; good food, and a tablespoonful of cod-liver oil three or four times a day. Galvanism to spine and the cervical ganglia of the sympathetic three times a week. The local and general improvement has been so satisfactory that she is now able to get up and around with the help of a cane, and to do light work with her hands. The pain and swelling and distortion of joints are much less; sleep and nutrition greatly improved.

CASE II.—Mrs. K——, aged thirty-four; German; married twice, had two still-births and two abortions; second husband had syphilis and died of phthisis. Patient presents no signs of either disease; no hereditary influences. In 1877–78 severe attack of bronchitis that

troubled her the whole winter, but eventually got well without any apparent damage to the lungs. After some years of trouble, anxiety, want and exposure, arthritis deformans broke out two years ago with pain and swelling of small joints of hands and feet, soon spreading to one knee, shoulder, and hip-joint. The disease was preceded by severe headaches, from which she suffers yet occasionally, but less violently. Some of the joints present a gelatinous feel, and several nodules of the above description can be felt beneath the integuments of her arms. No pain on pressure over sternum, clavicle, or tibia. Neither specific nor anti-rheumatic treatment, so-called, were of any service, but the disease has been very tardy in its progress, and the disfigurements of the joints are not to be compared to those of Case I. She has always been able to walk, though not without pain, and from time to time has been confined to her room. Appetite and general nutrition not good. The treatment described in Case I. was commenced in January, 1883, and carried out pretty regularly up to the present time, except as to the application of electricity. The result thus far has been satisfactory; further progress of the disease has been stopped; pain, swelling, and disabilities of locomotion are much less.

Case III.—Mrs. K——, aged thirty-five; American; married, multipara. Father in good health; mother suffering from diabetes and arthritis deformans. Patient well built and nourished; living in good circumstances; has been for some years very unhappy in her domestic relations, and been often deprived of rest and sleep, and otherwise maltreated. After a series of premonitory symptoms, such as hemicrania and neuralgias in the upper extremities, she showed the first symptoms of the disease in the joints of fingers, wrists, and shoulders about a year ago. Her urine contains phosphates (largely) and a little sugar. The affection has made no great progress as yet, and the treatment has not been carried out well enough to be of great service, owing to irregular attendance on the part of the patient.

Case IV.—Mrs. H——, aged fifty-five; multipara. No hereditary taint; no apparent cause other than a good deal of anxiety and grief on account of the persistent ill-behavior of her only son. First symptoms in small joints of fingers and toes five years ago. So far she has not experienced any great inconvenience from her affliction, but as often as she makes up her mind to take the propylamin mixture and cod-liver oil for some time great relief follows as to pain and swelling.

Case V.—Mrs. S——, aged sixty-five; German; married, multipara. No hereditary taint, but a good deal of exposure to rheumatic influences in her younger days. First attack in her right hip-joint fifteen years ago, which led in the course of time to a shortening of nearly three inches, and now to complete ankylosis. No other joints suffered until recently, when several small joints of the hands and feet became affected and she had to take to her bed. Various sorts of cures were applied to no purpose. For the last three months she takes propylamin and the compound syrup of the hypophosphites, with the result that she is able to be about again and that no other joints have been attacked.

Case VI.—Mr. G——, sixty years of age; Austrian; clergyman; single. Of good constitution and no hereditary taint. He served as a missionary in his prime, travelled extensively in South and Central America. He was, of course, exposed to the severe effects of unhealthy climates, and suffered many hardships besides. He had severe attacks of rheumatism, of which he got well, but eight years ago it settled in his right hip and left knee, and when I first saw him, five years since, he was in constant agony, confined to his bed for many months, and the above joints presented all the symptoms of advanced arthritis deformans. Some of the joints of his hands and feet had also become recently affected. His urine contained albumen in considerable quantities; there were amblyopia—the ophthalmological examination showing the affection of the retina often found in Bright's disease—and atheroma.

By the use of the iodides and the other remedies he was but little relieved, but two seasons at the hot springs of Virginia removed the severe recent affections of the joints, relieved his kidney trouble, and considerably improved his eyesight. The old affections of his hip and knee remained as before, but ceased to give him much trouble, so that he was able to be about and attend to his clerical duties.

Dr. E. C. Wendt, in opening the discussion, said that he had seen a number of cases of arthritis deformans, mostly in hospital practice, all of which had, under the usual plan of treatment, gone on from bad to worse. He had also seen one of Dr. Weber's cases, in which a marvellous result had been obtained, in a comparatively short time, by an entirely different plan of treatment. He thought the value of Dr. Weber's interesting paper lay mainly in the therapeutic suggestions which it contained; for if other observers corroborated the ideas here advanced a decidedly progressive step would have been taken. He thought it was important to elucidate the causation of the disease; mere symptomatic treatment was quite irrational.

Dr. Dana remarked that the few cases seen by him had not illustrated the neurotic origin of the disease. In New York he was of the opinion that the disease was rarely met with in private practice. He had seen only a few cases in hospital and dispensary service; this was even true in the Marine Hospital for sailors, where rheumatism abounded. He recollected having seen one aggravated case; the patient was an old woman, some seventy years of age, who had suffered from the disease for sixteen or seventeen years. It began in the vertebral column, and gradually involved the hips, knees, and toes. She was so helpless that in order to evacuate her bowels it was necessary to place her in the horizontal position over a pail. The patient had Bright's disease, and died of apoplexy. Upon post-mortem examination deposits of urates were found in the joints of the great toes. The patient was poor, and surrounded by all the conditions favorable to the development of the disease.

Dr. Dana said he had seen some women of a neurasthenic type, women who had suffered from functional nervous disturbances, who developed a kind of inflammatory swelling of the fingers, so that in one case the hands became almost useless. He did not know but that later on in life these cases might develop into arthritis deformans, and if so, would illustrate the theory advanced in the paper. In considering neurotic inflammation of joints, Dr. Dana thought the relation of the trophic nerves to them, if there are any trophic nerves, should not be lost sight of. Never, so far as he knew, have we found any articular disease following from functional nervous trouble. The nervous difficulty must be organic. In no experiment upon animals, except where an organic lesion of the spinal cord has been produced, have we been able to produce arthropathies.

Dr. Wendt did not know that the author's paper contained any evidence that the disease was developed from an organic lesion of the spinal cord. If there had been such disease of the spinal cord, improvement could not have been so rapid. He thought the neurotic condition was not the ultimate but an intervening cause. If we would go back sufficiently far into the history of these cases he thought we would find that there was at first a disturbance of nutrition, on the basis of which the neurotic condition developed.

Dr. Burrall wished he could add something to our knowledge of this subject. The disease was one we were continually meeting. It seemed to him to be an arthritis resulting from trophic changes. In two cases which he could now call to mind these changes resulted from worry. One case had gouty trouble. There was no uric acid found in the urine of patients suffering from arthritis deformans. As far as therapeutics were concerned, he

knew of only two remedies. The two remedies he would hope to derive beneficial results from the use of were arsenic, which is a nerve-tonic, and eupatorium perfoliatum (boneset).

THE PRESIDENT felt like adding a word in regard to the practical part of the paper. He had not seen many cases of arthritis deformans in private practice; he could only recall five. It was probable that most cases were seen by the general practitioner. In the first four he had met with unsatisfactory results; but in the last, becoming convinced of the fruitlessness of the anti-rheumatic plan of treatment, he had administered cod-liver oil, iron, and static electrization with great benefit to the patient. He was of the opinion that the disease occurred most frequently in the so-called neurasthenic. It was interesting to note that the first advocate of the neurotic origin of the disease was an American, Dr. J. K. Mitchell, the father of Dr. S. Weir Mitchell, now of Philadelphia. At this very early date, 1834, Dr. Mitchell announced it as his theory that acute, subacute, and chronic rheumatism were diseases of the spinal cord. The neurotic theory of the origin of the disease in certain subacute forms was a very attractive one. He was prepared to admit, as an argument in its favor, that the ordinary anti-rheumatic treatment fails to relieve the patient. In the next place, there is a well-understood relationship between the disease in question and well-recognized nervous ailments. We have only to call to mind the arthropathies of the myelites of traumatic neuritis of certain hemiplegias to find a defensible relationship to the changes in the joints characteristic of arthritis deformans.

DR. DANA remarked that as interesting as it might be to claim the theory of the neurotic origin of arthritis deformans for America, it was difficult to see how the information afforded by the President's remarks made it clear that such really was the case. The author of the paper had laid special stress upon the idea that arthritis deformans was an essentially different disease from acute or chronic rheumatism. Hence Dr. Mitchell could not be credited with the origin of this theory, as his claims concerned only acute and chronic rheumatism.

THE PRESIDENT did not think that Dr. Mitchell's claims were thus narrowly restricted. It was doubtless true, however, that these claims should not have covered all forms of rheumatism as known at his day.

DR. BURRALL incidentally called the attention of the members of the Society to the fact that there was at the present time a case of Charcot's disease in the wards of the Presbyterian Hospital of this city. Dr. Charcot claims that Dr. Mitchell was the first to associate joint disease with the central nervous system.

Correspondence.

RANDOM NOTES AND OBSERVATIONS OF A TRIP THROUGH THE GREAT NORTHWEST.

Motto: Go West, young man!
And if you can't go West,
Go as West as you can.

TO THE EDITOR OF THE MEDICAL RECORD.

DEAR SIR: Before leaving Montana, it seems well to say a few words concerning its capital, Helena, which is also the acknowledged business centre of the Territory. Helena is nothing, if not queer and peculiar. It represents to-day an imperfectly matured conglomeration of the most opposite elements. Indeed, at present the new city seems all superstructure, which rests, apparently secure, upon the basis of a crude mining camp. Those curiously puzzling types of humanity, which Bret Harte's genius has rendered so familiar to the reading public, may still be encountered in Helena. Not precisely as they appear in the pages of that gifted author, however; for stern reality has robbed them of the poetic halo which there surrounding them, softens harsh truth and wakes our pitying sympathy by gently playing upon the chords of a common humanity. But the passing stranger detects no redeeming features about most of these sombre, sullen, repulsive-looking fellows. They seem simply odious, nothing more. An involuntary sense of aloofness fastens itself upon you, and as you willingly pass them by you feel relieved.

In addition to these rougher characters, however, and mingling incongruously with them, are found various representatives of the older civilization of the East, and that still older one from across the ocean. Thus hard-faced men, with restless, anxious mien that plainly speaks of gambling, drink, and pistol, jostle the eager youth of slender build and pale complexion, the unmistakable gentleman, and probably a late arrival in this ever moving, busy crowd. Again, the primitive profanity of a waning era may still be heard in answer to the affected British of some Harvard stripling. All are slaves to a devouring ambition—that of getting rich quickly. All have come to try their luck. The very air you breathe seems charged with this strong contagion. Indeed, so intent are they on quick success, that they never dream of possible failure. And it must be admitted they do succeed. No longer as in the past, not yet remote from present, by the single method of gold-mining; but in many of the recognized and legitimate business capacities of the East, or as professional men.

Has vice found a safer abode and more congenial soil there than in the centres of Eastern wealth and fashion? Who shall say yes without some show of hesitancy? Certain it is that they display a touching openness about vicious pursuits and habits. Certain, too, that the refined and subtle hypocrisy of a more complex, because more advanced civilization, has not yet clothed the hideous nakedness of vice in misleading tinsel. But is Western vice, therefore, more disgusting, more sinful, more degrading than her much attired twin-sister of the East? It all depends upon the moral point of view, which is a shifting, changeful thing, half statute and half conscience. Openly, artlessly, without attempted guise, vice walks the streets of Helena in clear, broad day-light. At night it is becomingly illuminated by electric lamps. And the uniformed representatives of law and order calmly smile and pass by. Thus universally sanctioned, protected, and practised, perhaps it ceases to be vice at all, and becomes a mere peculiarity, an innocent pastime. As just stated, it all depends upon the point of view.

A noted divine, seeing what has here been faintly shadowed forth, said that he felt better satisfied with this condition of things than what obtains with us. For, he argued, where I can see the devil so plainly, I can easily fight and conquer him; it is the devil that hides behind a bush who is so hard to catch. Evidently, then, the influx of a few Eastern devil-fighters (and perhaps we could spare a few) would soon make Helena and towns of her stamp models of virtue, sobriety, and refinement—that is to say, from an Eastern standpoint. But enough of this. As George Eliot has it, "whatever benefit there may be in denouncing the evil, it is after all more edifying, and certainly more cheering, to appreciate the good." Hence let us hasten to remember that this city's life at present illustrates but a transition period from a lower to a higher level; that Helena has already achieved a commercial supremacy over many other ambitious towns; that there may be much golden truth in the proud boast of her citizens, to the effect that she is, in proportion to her population, even now the richest city in the world; that pure men and virtuous women have found abiding homes there; and that if we were all born good, it would no longer be meritorious to be so.

Soon after leaving Helena, the main range of the Rocky Mountains is crossed, the road now going over the Mullan Pass. Here a tunnel nearly four thousand feet long is building, and will soon be completed. Mr. E. V. Smalley has recently so well described this interesting region that your correspondent easily yields to the temptation of quoting from his letter:

"Approached from the East," he says, "the Rocky Mountains seem well to deserve their name. Gigantic cliffs and buttresses of granite appear to bar the way, and to forbid the traveller's further progress. There are depressions in the range, however, where ravines run up the slopes, and torrents come leaping down, fed by melting snows. Over one of these depressions Lieutenant John Mullan built a wagon road a score of years ago, to serve the needs of army transportation between the head of navigation at the Great Falls of the Missouri and the posts in Oregon. Mullan's wisdom in selecting the pass, which bears his name, was endorsed when the railroad engineers found it to be the most favorable on the Northern Pacific line. The road is carried up ravines and across the face of foot-hills to a steep wall, where it dives into the mountain side, runs under the crest of the Divide through a tunnel three-fourths of a mile long, and comes out upon smiling green and flowery meadows, to follow a clear trout-stream down to a river whose waters seek the mighty Columbia. The contrast between the western and eastern sides of the Main Divide of the Rockies is remarkable. On the eastern slope the landscapes are magnificently savage and sombre; on the western slope they have a pleasant, pastoral beauty, and one might think himself in the hill country of Western Pennsylvania instead of high upon the side of the great water-shed of the continent. The forest tracts look like groves planted by a landscape gardener in some stately park, and the grassy slopes and valleys, covered with blue and yellow flowers, and traversed by swift, clear brooks, add to the pleasure-ground appearance of the country. What a glorious place this would be for summer camping, trout fishing, and shooting, is the thought of every traveller as he descends from the summit with his hands full of flowers picked close to a snow-bank. Snow Shoe Mountain rises just in front, across a lovely verdant valley. Powell's Peak, a massive, white pyramid, cuts the clear sky with its sharp outlines on the further horizon, and a cool breeze blows straight from the Pacific Ocean."

The Cascade Mountain range divides Washington and Oregon into an eastern and western territory. To do even scant justice to the attractiveness of the varied scenery of either district is quite impossible within the limits of this letter. There seems to be spread out before the entranced view a never-ending series of variegated landscape wonders and surprises. Now you see a panorama of natural parks with all the luxuriant vegetation of the Pacific lands. Then dense, dark, forbidding forests, wooded with mighty firs and pine-trees. Again you are delighted by charming valleys, all smiling sunshine, that invite lingering rambles and long repose. But grander and more imposing far than these gentler pictures, the giant peaks of the Cascades rear their proud heads, clad in the pure white of perpetual snow, high into the clear azure of this Western sky. Before the overpowering presence of these dazzling summits, the memory of Switzerland's fair Alps shrinks into that dark recess of the mind which may be called a willing forgetfulness. It is only when the Cascades too have gradually faded out of sight that comparisons seem at all admissible. And Puget Sound, too, than which no finer inlet has crept landward to form deep harbors, well-sheltered, navigable, and attractive. Finally, that mighty current, the Columbia River, with its banks of unrivalled, ever-changing, richly colored splendor. Surely these Territories have a grander and more manifold natural beauty than may be easily found in the entire Union, perhaps in all America.

As for the climate of Washington and Oregon, two widely different regions must be distinguished, the Cascades separating one from the other. East of this range there is an annual mean temperature not unlike that of Pennsylvania. Short spells of extreme cold occur, but not too often. The air feels dry, so that the heat of summer seems less oppressive than with us. The mornings and evenings are invariably cool, if not positively cold. On the other hand, the western region, lying beyond the Cascades, enjoys an equable climatic mildness, quite peculiar to itself. One great moderator of winter's severity is the Japan current. Snow is a rarity, but there is a prolonged rainy season to replace the frigid winter of the East. And finally, a bright, sunshiny, temperate summer compensates largely for the more or less steady drizzle of a rather dreary fall and winter.

There is little to say about the towns and cities of these vast Territories. With the single exception of Portland, in Oregon, their greatness and importance lie in no past or present. Their future significance, however, seems not too far ahead. It appears not as the rash guess of the enthusiast, but like the exact calculation of the astronomer, to predict for them a near destiny of business thrift, prosperity, and fame. Really one feels that for once the study of the infant justifies the prognosis of the man to come.

With a feeling of reluctance, then, as when parting from some new acquaintance of congenial mien and sympathetic manner, your correspondent turns to other matters.

But not without casting a farewell glance upon Portland, justly called the metropolis of the Pacific Northwest. This rapidly growing city already claims 40,000 inhabitants, and presents the general appearance of a new, enterprising, flourishing business town. In its peculiarly advantageous situation it combines with the facilities of the seaport all the conveniences of an inland town. Deep-going ocean steamers stud its numerous wharves, although the Pacific is nearly one hundred miles away. It is, besides, a distributing centre for a large land traffic, having several railroad depots. And it is quite characteristic of this far Western town to see the thick-wood-lands of the surrounding wilderness receding, as it were, only step by step as the city limits steadily extend and encroach upon them. Thus, without sensible gradation or intermediate link, primeval forest is here at once transformed into modern city.

The practice of medicine is somewhat peculiar in Portland. Physicians earn but small incomes, compared with the great riches accumulated in trade. The average doctor cannot get much beyond an annual income of from $2,500 to $3,000. A very few may receive $10,000, which would appear to be the maximum limit. Add to this that bills are often difficult of collection, especially for the beginner; that the profession, unlike what obtains in most other towns in Oregon, is already overcrowded; that living, finally, is higher than in New York; and it will be readily perceived that there is no promising field here for the youthful medico. Rheumatic and malarial troubles are the most popular affections in Portland. Acute pulmonary diseases are said to be rare.

The Portland doctors have a Medical College with all the modern professorships, and two hospitals. They feel proud of these institutions. Moreover, they live content and happy in the absence of patient-stealing dispensaries. The *Portland Medical Advance*, however, is a thing of the future. At present they all read THE RECORD, and those who do not ought to.

In taking final leave of the new Northwest, this infant stripling of huge dimensions and great pretensions, it may not be amiss to briefly dwell upon a few, a very few, of the most prominent oddities of that region.

It is certainly odd what enormous vegetables they raise there. And it is quite odd to note with what pertinacity they intrude these growths upon the attention of the tourist.

From Fargo on, the attacks of the vegetarian begin. He is no dallying amateur, but a dead-earnest professional. He insists on your sharing the glow of pride that starts through his susceptible constitution while lost in rapt admiration of a huge potato, or an immense cabbage, or a giant pumpkin. Next year, he solemnly declares, they will be much bigger. This was an off-year for crops anyhow. And sure enough, at the next station they have

already attained additional size, although there too they are attended by similar comments. Well, these marvellous products of an extraordinary soil keep right on getting bigger and bigger all the time, partly at the successive stations and partly in the minds of the truthful farmers; until at length you begin to wonder, in a dazed kind of way, why on earth, from sheer stress of accumulated weighty vegetation, the earth does not tip over at that particular point.

It is, further, odd to note what stress is laid on bigness —generally. Quite apart from vegetable bigness, which has just been alluded to, they call everything that may typify or characterize the West, "something big." It is this one attribute that appeals most directly, emphatically, and eloquently to the Western senses. Out there some few things are great, but everything is big—in the estimation of themselves.

Take the extent of Western territory, for example. It is the "biggest country on the face of the globe." Of course, as regards this particular point, we of the East are almost as knowing as they of the West; for we also never allow suitable or unsuitable opportunity to pass without proclaiming that remarkable discovery to mankind at large. But what we hardly suspected is, that almost every single Western State or Territory is "bigger than all the rest of the world put together"—with a margin to spare for undiscovered countries.

This deplorable ignorance of geographical details constitutes one of the most serious drawbacks of an Eastern education—as your correspondent was repeatedly called upon to admit; which he always did with commendable alacrity, in deference to the acknowledged power and steady aim of Western arguments.

Again, it is odd to find in what high esteem they hold the surviving pioneers and early settlers. But no. On second thought that is not odd at all, only quite human and deeply touching. That fast-dwindling band of brave-hearted, whole-souled, toiling men, will not live to see their work completed. Pioneers never do. Yet their humble lives, spent amid dreary surroundings and filled with vicissitudes, will not have been lived in vain. Surely they will have served a higher purpose, and have fulfilled a nobler aim than the mere bequeathal to posterity of a sturdy race of honest, cheerful, hopeful workers. For they will once more have taught the world the glorious lesson that unostentatious heroism and patient toil need not be, nay, cannot be futile. Theirs, too, will be the proud victory of persevering energy, invincible determination, and unflagging spirits, against great natural odds and over the many obstacles of human ignorance, prejudice, or pride.

Doubtless the names of all these pioneers will ere long be consigned to oblivion, unmerited though it be. But let us hold the class, at least, in reverential memory. What they may have cherished as some fond dream alone we already see in incipient fulfilment. No prophetic foresight is needed to-day to predict that their early labors and trials will not have been fruitless. And so, with a parting pressure of the horny pioneer hands, we leave the new Northwest, confident that it will work out its own destiny of greatness, and with our God-speed on the journey.

Very truly yours,

EDMUND C. WENDT, M.D.

136 WEST THIRTY-FOURTH STREET,
NEW YORK, November 3, 1883.

CONCERNING THE EPIDEMIC OF MEASLES AT THE INFANT ASYLUM.

TO THE EDITOR OF THE MEDICAL RECORD.]

SIR: The medical gentlemen connected with the management of the New York Infant Asylum, and Dr. Brush, of Mt. Vernon, occupy considerable space in your last issue in severe criticism of our report upon the epidemics recently prevailing. There is so much misquotation of us, and such a reckless use of quotation marks, that we find it difficult to accept some of their statements as meant in earnest. We deprecate such discussions, and this is our final reply:

Had we been aware of the susceptibility of these gentlemen to measles, our report might have been modified to meet their views. The report in question was made to the Board of Managers, and according to facts and information acquired in a very usual and legitimate manner. It was not intended as a medical essay. The peculiarities of the epidemic we hope to elaborate at some future time, and under fitting circumstances. Yet we may be credited as having appreciated the severity of the diseases, and as noting the unusual number of recurrences of measles. Nor were we oblivious to the fact that such an experience was uncommon, or perhaps unique, but in publishing the statistics we meant no offence.

The declination of certain physicians to serve upon the asylum staff, and the resignation of others, as brought forward by Dr. Nicoll, has no very intimate bearing upon the accuracy of our report, and is but remotely associated with measles in general.

The communication of Dr. Brush, and that signed by Drs. Foster, Blakeman, Burrall, and Goodridge, are quite similar. For they both contain the same partial quotations from Ziemssen's "Cyclopædia," and the same sentences, transferred from Dr. Louis Thomas' article on measles, without credit. (See sentences in each communication beginning: "Even Panum . . ." Then see Ziemssen, vol. ii., p. 43.)

We think it hardly fair to quote (from p. 42) only the following sentence: "Second attacks of measles are, according to the experience of most observers, exceedingly rare, as much so as second attacks of variola, scarlet fever, varicella, etc." For, following this, Thomas says: "Third attacks are even less frequent, though their occurrence . . . cannot be doubted." Then, too, the next sentence contains the account of a child who had measles three times within about three months.

In fact, in this article in Zeimssen over forty names of authors are given as reporting cases and epidemics where frequent individual recurrences of measles have been observed.

It is true that we did not personally witness each and every one of these attacks. Yet, from properly directed inquiries of the mothers, nurses, and resident physician and her assistant, and with the exercise of some judgment on our own parts, we arrived at the conclusions which justified our published report. We were led to accept these facts unaided by an acquaintance with the article in Ziemssen, and in ignorance of Dr. Cheadle's conclusion (*Brit. Med. Jour.*, December 20, 1879), that, from a personal analysis of twelve cases of measles he does not believe a previous attack affords any immunity. And, finally, we were not cognizant of the fact that Dr. Joel Foster had reported to the Executive Committee of the Board of Managers, on September 29th, "that since August 1st last an epidemic of a fatal character had raged, resulting in fifty-one deaths; appearing in measles of a malignant form, different from any known to him in his experience—of an obscure character, recurring twice, thrice, four, and five times in the same patient; the sequelæ of which was most dangerous," etc., etc. (Printed minutes Ex. Com. Bd. Managers N. Y. Infant Asylum, September 29, 1883.)

Had we known of Dr. Foster's testimony, he being a physician of standing and of large experience, we should not have hesitated so long in accepting the statements of those in charge of the children as to these peculiar features. We now can only wonder why he should sign a protest against the results of his own observations.

GEO. B. FOWLER, M.D.
E. BRADLEY, M.D.
F. M. WARNER, M.D.

ON THE USE OF WARBURG'S TINCTURE IN MIASMATIC FEVER.

To the Editor of The Medical Record.

Sir: For many years, in treating miasmatic fever which would not yield to quinia, I have been accustomed to prescribe Warburg's tincture. According to my experience, it is worth all other succedanea put together.

About six years ago, a medical friend consulted me for intermittent fever, utterly rebellious to the power of the quinia salts. His health had suffered greatly and he was obliged to temporarily give up his practice. I prescribed the tincture of Warburg in half-ounce doses, taken on an empty stomach, early in the morning. It was rapidly and completely successful in its effect. Several months ago he applied to me with a recurrence of his old trouble, saying: "But doctor, don't give me Warburg. I think I'd almost as soon die as take it. Even when I look at the bottle containing it, I become nauseated. It is an awful dose to swallow!"

I begged him to go to his apothecary, have the tincture evaporated in a water-bath to such consistence as would allow it to be put into gelatine capsules, and to take the equivalent of a half fluidounce thus prepared.

It answered the desired end perfectly, without causing discomfort of any kind. Since then many patients have taken "Warburg's Capsules," with a like result. One of them contains the potency of two fluidrachms of the tincture. With some persons, rather too active purgation follows the ordinary dose of two capsules. This can be easily regulated, by leaving out or diminishing the amount of aloes in the original formula.

I have had excellent results, also, follow administration of the capsules made by evaporating the modified Warburg's tincture, in which the alkaloids of cinchona replace the sulphate of quinine.

In cases of intermittent fever which are prone to recur, after having been once broken, I rely much more upon the daily dose of two capsules—taken early in the morning—than on any other remedy known to me.

The evaporated mass becomes hard very soon, unless glycerine be mixed with it before filling the gelatine cups.

Very respectfully yours,

John T. Metcalfe, M.D.

Obituary.

JAMES MARION SIMS, M.D.,

new york.

The sudden death on Tuesday morning of the distinguished surgeon, J. Marion Sims, was a shock to every one. Although lately he had not been in robust health, no one had reason to believe that his valuable life might not be spared for many years. Reaching the age of three score years and ten, he had a remarkably young appearance, and with a good claim for longevity, he was often heard to say that he expected to see his ninetieth year. Up to the last he was active, ardent, and laborious. Death was the result of heart-failure, attendant upon atheroma of the coronary arteries and fibrous myocarditis

Dr. Sims was prostrated by a very severe attack of pneumonia three years ago, and he sank so low in that illness that his family and physicians thought for a while that he would die. He rallied, however, and recovered almost entirely, as it seemed, from the attack. The piercing cold weather of fall and winter in this climate was more than he could endure, and he arranged to spend his winters in Italy. He was to have sailed for Europe, with his family to-day, en route for his Italian residence. He had even planned to sail a week ago, but was prevailed upon to stay and perform an important operation. He said on Monday that he had not felt so well in a year, and was in the best of spirits. In the evening of the same day, with his son, Dr. Henry Marion Sims, he attended a patient, and on his return sat down to write on his autobiography, about one-half of which he had finished. He complained of a little pain over his heart, but continued to write. He retired, but was restless during the night, and shortly before 3 o'clock on Tuesday morning he turned up the gas and wrote for a time in bed. A little later his wife noticed that he was breathing in a peculiar manner and hastened to call his son. When Dr. H. Marion Sims reached the bedside, his father gave one short breath and expired at 3.15 A.M.

Dr. Sims was born in Lancaster District, South Carolina, on January 25, 1813. His education began in the common school, and he was graduated from the South Carolina College in 1832. After studying for a short time at Charleston he entered Jefferson Medical College, Philadelphia, completing the course in 1835. He began practice in the following year at Montgomery, Ala., making a specialty of gynecology, though he also became known for his skill in general surgery. In 1845 he published a series of papers in the *American Journal of the Medical Sciences*, developing an original theory of trismus nascentium. About the same time he began a series of experiments in the treatment of vesico-vaginal fistula, and, after four years, perfected a method of curing a disease that had been thought incurable, by the substitution of sutures of silver for those of silk thread then in use. In 1853 he came to New York, and, in addition to building up a lucrative practice, succeeded in establishing a hospital for women. The institution was at first supported by private contributions, with a grant of $2,500 from the Common Council, but in 1858 a charter was obtained from the Legislature, and the city gave the land at Forty-ninth Street and Lexington Avenue upon which to erect the pavilions, with an appropriation of $10,000. After a study of hospital architecture in Europe he decided to have the hospital built in pavilions. The first pavilion was ready for the reception of patients in 1866, and, unlike most philanthropists, Dr. Sims lived to see the institution which he founded surpass even his own expectations in importance and usefulness.

Dr. Sims's reception in Europe was of the most cordial and flattering character. By special invitations he operated in several of the great hospitals in Paris, Brussels, London, and Dublin, and his extraordinary success elicited the warmest praise from some of the most eminent practitioners in Europe. He was greeted in many places as one of the greatest surgical discoverers and operators of the age. The French people were especially impressed with him, and the French Government conferred upon him the order of Knight of the Legion of Honor. Honors were also paid to him by the King of the Belgians, and subsequently he was decorated by the Italian, Spanish, and Portuguese Governments. Dr. Sims took his family to Europe in 1862, and he spent a large part of his time there during the next six years. In 1870 he returned to Paris from New York to visit his family, which he had left abroad. When the Franco-Prussian war broke out Dr. Sims was induced to take charge of the Anglo-American Ambulance Corps as surgeon-in-chief. This was the first ambulance corps to arrive at Sedan, where it rendered services of incalculable value, and the fame of Dr. Sims was greatly enhanced by the heroism, energy, and remarkable skill displayed by him. He was the oldest man who left Paris in the ambulance service. Dr. Sims built up a large practice in France and Belgium, where his services were in constant demand among people of wealth and high social standing. His genial manners and magnetic social qualities made him very popular abroad as well as at home.

The subject of this sketch was, during his life-time, elected an honorary member of scores of medical and scientific societies in every part of Europe and in every part of this country. In 1875 he was elected President

of the American Medical Association. He was a member of the County Medical Society, of the Pathological and Surgical Societies, the Academy of Medicine, and the Neurological Society. Dr. Sims' most important literary works are "Trismus Nascentium," "Silver Sutures in Surgery," "Clinical Notes on Uterine Surgery," "The Microscope in the Sterile Condition," a "History of the Discovery of Anæsthesia," "Treatise on Ovariotomy," "Intra-Uterine Fibroid Tumors," and his Centennial address before the American Medical Association in Philadelphia, June 6, 1876.

During the past two years Dr. Sims spent a couple of months of each autumn in this city, the winters in Rome or Nice, and the remainder of the year in Paris and other parts of France. During this time he has written many articles on surgical subjects. The funeral, which was largely attended, took place at 10 o'clock on Friday morning, in the Madison Square Presbyterian Church, of which the dead surgeon was one of the oldest pewholders.

The autopsy was made by Drs. W. H. Welch and G. L. Peabody. Present: Drs. A. L. Loomis, W. H. Welch, J. A. Wyeth, and W. Gill Wylie.

The heart was found to be somewhat enlarged, with adherent pericardium. The valves were competent. The calibre of each coronary artery was markedly narrowed by atheroma, which was partly calcareous. In the muscular tissue, at the upper part of the interventricular septum, there was a patch of fibrous myocarditis as large as a silver quarter of a dollar, with the beginning of an aneurismal pouch. There was a similar fibrous myocarditis in the papillary muscle, which controlled the anterior segment of the mitral valve. Both ventricles were dilated, and the left hypertrophied. The lungs were slightly congested and œdematous. The parietal and visceral pleura on the left side was everywhere adherent. The kidneys and liver showed lesions of chronic congestion. Brain normal. Some atheroma of internal carotid arteries.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 3 to November 10, 1883.

BACHE, DALLAS, Major and Surgeon. S. O. 238, par. 1, A. G. O., October 18, 1883, assigning him to duty at Willett's Point, N. Y., revoked. S. O. 252, par. 2, A. G. O., November 3, 1883.

STEINBERG, GEORGE, Major and Surgeon. Leave of absence granted October 4, 1883, extended one month. S. O. 255, par. 4, A. G. O., November 7, 1883.

VICKERY, R. S., Major and Surgeon. Assigned to duty at Fort Townsend, W. T. S. O. 149, par. 3, Department of the Columbia, October 29, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Granted leave of absence for one month. S. O. 201, par. 6, Department of the East, October 24, 1883.

MERRILL, J. C., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 201, par. 7, Department of the East, October 24, 1883.

PATZKI, J. H., Captain and Assistant Surgeon. Granted leave of absence for three months, on surgeon's certificate of disability. S. O. 254, par. 6, A. G. O., November 6, 1883.

OWEN, W. O., First Lieutenant and Assistant Surgeon. Relieved from duty at Vancouver Barracks, W. T., and assigned to duty at Fort Stevens, Oregon. S. O. 148, par. 2, Department of the Columbia, October 26, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Townsend, W. T. S. O. 149, par. 2, Department of the Columbia, October 29, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 3, 1883.

GORGAS, A. C., Medical Inspector. Orders to the Naval Hospital, Mare Island, Cal., revoked, and to remain at Naval Hospital, Chelsea, Mass.

ROBINSON, SOMERSET, Medical Inspector. To the Naval Hospital, Mare Island, Cal.

DEARBORNE, F. M., Surgeon. To appear before the Retiring Board, November 5th.

GIHON, A. L., Medical Director. To represent the Navy at the meeting of the American Public Health Association at Detroit, Mich., November 13th.

HUDSON, A., Medical Inspector. To represent the Navy at the meeting of the American Public Health Association, at Detroit, Mich., November 13th.

EDGAR, J. M., Assistant Surgeon. From the Receiving Ship St. Louis, at League Island, Pa., to the Receiving Ship Wabash, at Boston, Mass.

AUSTIN, A. A., Passed Assistant Surgeon. To the Receiving Ship St. Louis, at League Island, Pa.

There were no changes during the week ending November 10th.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 13, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 6, 1883.....	1	36	38	4	19	31	0	0
November 13, 1883.....	1	50	67	3	22	43	0	0
Deaths.								
November 6, 1883.....	0	16	6	4	3	19	0	0
November 13, 1883.....	1	21	8	1	1	23	0	0

AUTO-TRANSFUSION IN HEMORRHAGE.—Attention has been quite frequently called to the value of auto-transfusion in cases of severe hemorrhage. In the *Wiener Med. Blätter*, of February 23d, Professor Braun relates a case of inversion of the uterus in parturition with severe and almost fatal hemorrhage, in which this method was resorted to. Elastic bandages were wrapped around the legs, with an immediate dissipation of the alarming symptoms. The hips were raised, ether injected, and stimulants administered. The bandages were kept on for nineteen hours. This method is especially applicable to post-partum hemorrhage from any cause, and is easily and quickly applied, much more so than transfusion. Doubtless, so prolonged an application might have its dangers in a few instances, but the advantages would far more than counterbalance the dangers. It may be remarked that the inversion was caused by pulling on the cord of an adherent placenta, a far too frequent error, we fear, in view of the dangerous results which have in many instances followed it.

OÖPHORECTOMY IN A GIRL EIGHT YEARS OF AGE was recently performed successfully, by a French physician, Dr. Duchamp. The left ovary and a large part of the Fallopian tube were removed.

AN EPIDEMIC OF TRICHINOSIS has broken out in Saxony. Over four hundred persons are said to have been attacked. Moreover, it is German, not American pork, which caused the trouble.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 21 NEW YORK, NOVEMBER 24, 1883 **Whole No. 681**

Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

BY J. LEWIS SMITH, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

SEVERAL years ago, before New York physicians had any personal experience with cerebro-spinal fever, an outbreak of it of moderate extent occurred at or near Long Branch, and, from its proximity, physicians were apprehensive that it might enter New York. Very interesting discussions consequently took place in the Academy of Medicine concerning the cause and nature of this malady, and theories, crude and unfounded, in consequence of inexperience, were then expressed. Unfortunately the fears of physicians who participated in that discussion have been realized. The disease entered this city in the autumn of 1871, appearing first among the horses of the large stables of the stage and car lines, disabling and destroying many of them. In December, 1871, it commenced among the people, and since that time it has not been absent from the city. Its unknown cause, which in country towns soon dies out or becomes inoperative, from the lack of the conditions which sustain and perpetuate it, finds in this great assemblage of people, and in the state of the streets and domiciles, the conditions favorable for its development and sustenance, so that cerebro-spinal fever is now fully established with us. It has become one of the scourges of childhood, destroying many lives each year, and injuring irreparably, by deafness or in other ways, many who recover. We are now much better prepared, by sad experience, to discuss this disease than were those physicians who participated in the debates alluded to above.

ETIOLOGY.

It is not improbable, from the clinical history of cerebro-spinal fever, and from recent discoveries touching the parasitic origin of several of the common constitutional maladies, that the obscure and mysterious cause of cerebro-spinal fever will yet be discovered by microscopical and clinical research. Leyden, indeed, has published in a recent issue of the *Cent. f. Klin. Med.*, p. 61, a paper on the micrococcus of cerebro-spinal meningitis, and M. Ernest Gandier (*Rev. Medicale*, June 3, 1882, New York MEDICAL RECORD, September 9, 1882) states that he has discovered in the blood and urine of a patient, examined fresh and with "antiseptic precautions," micrococci in great abundance. But proof is lacking that these micrococci sustain a causative relation to the disease.

At the debates in the Academy the question was raised whether the cause might not reside in the cereals or some other agricultural products. This is improbable, for of two adjacent localities, in which the diet of the inhabitants is the same, one escapes and the other is visited by the epidemic. The disease ceases after a time, although the food of the people remains unchanged. Infants at the breast having only the mother's milk are sometimes affected, and likewise certain animals whose food is very different from that of man, and finally the most careful examinations have hitherto failed to discover any dietetic cause of the malady. That the cause does not emanate from the soil, directly at least, is probable from the fact that many epidemics commence in the winter when the ground is frozen, and that they occur in localities where there is every kind of soil and the most diverse geological formations. Probably, therefore, the cause, whatever its origin and nature, resides in the atmosphere, and enters the system through those channels which receive air. Prof. Wm. H. Welch writes to me on this subject: "Worthy of consideration, though unproven, is the view of Medin, that the infectious material is absorbed by the lymph-spaces of the nasal mucous membrane, which, according to Key and Retzius, communicate on the one side with the atmosphere through openings between the epithelial cells, and on the other side with the subarachnoid spaces at the base of the brain."

Among the conditions which are favorable for the occurrence of cerebro-spinal fever, and may therefore be regarded as predisposing to it, we may mention the winter season. Statistics collected in Europe and the United States show that while 166 epidemics occurred in the six months commencing with December, only 50 were in the remaining six months of the year. According to the statistics of Prof. Hirsch, which were collected mainly from Central Europe, 57 epidemics were in winter or winter and spring, 11 in spring, 5 between spring and autumn, 4 commenced in autumn and extended into winter, or into winter and the ensuing spring, and 6 lasted the entire year. I suspect that the opinion expressed by Prof. Hirsch is correct, that the excess of epidemics in the winter months is due mainly to the greater crowding and less ventilation in the domiciles during the cold than warm months, especially among the European peasantry. In New York City, where the state of the domiciles is about the same the year round, the season appears to exert little influence on the prevalence of the disease.

All observers have remarked the fact that anti-hygienic conditions increase the liability to cerebro-spinal fever; in other words, produce such a state of system that it more readily yields to the morbific influence and contracts the malady. Hence soldiers in barracks and the poor in tenement-houses suffer most severely when the epidemic is prevailing. In New York City the fact is often remarked that multiple cases occur for the most part where obvious unsanitary conditions exist, as in apartments which are unusually crowded and filthy, or in tenement-houses around which refuse matter has collected, or which have defective drainage. The interesting chart prepared under the direction of Dr. Moreau Morris for the Health Board, shows that comparativly few cases occurred in the epidemic of 1872 in those portions of the city where the sanitary conditions were good. Anti-hygienic conditions probably predispose to cerebro-spinal fever in the same way that they do to other grave epidemic disease, as for example, to Asiatic cholera, whose ravages are chiefly where hygienic requirements are most neglected We will presently relate striking examples which show how foul air increases the number and malignancy of cases.

Is cerebro-spinal fever contagious?—It is the almost unanimous opinion of those who are most competent to judge from their observations, that it is either not contagious or is contagious in only a slight degree. It is certain that the vast majority of cases occur without the possibility of personal communication. Thus, in the commencement of an epidemic, the first patients are affected here and there, at a distance from each other, often miles apart, and throughout an epidemic, usually

only one is seized in a family. Children may be around the bedside of the patient, passing in and out of the room without restriction, and yet we can confidently predict that none of them will contract the malady, if there be proper ventilation and cleanliness, and none of the conditions of insalubrity exist within or around the domicile. Moreover, when multiple cases occur in a family, the disease begins at such irregular intervals in the different patients, that there can be little doubt in most instances that it is not communicated from one to the other, but, like the fevers from marsh miasm, is produced by exposure to the same morbific cause, existing outside the individuals, but within or around the premises. Thus in the Brown family treated by the late Dr. John G. Sewall, of New York (New York MEDICAL RECORD, July, 1872), the first child sickened January 30th, and subsequently the remaining five children at intervals respectively of five, seven, eleven, twenty-five, and forty-five days. That so many were affected in one family was attributed by the doctor to the filthy state of the house and the bad plumbing, which allowed the free escape of sewer-gas. In my own practice, in the family which suffered the most severely of all, four patients were seized in succession, and yet I could see no evidence of contagiousness. The family occupied a small plot of ground, not more than thirty feet by one hundred, and their occupation was to prepare for the meat-market what is known as head-cheese. They lived on the second floor of the two-story wooden house in which the work was carried on. At the time of the sickness the shop contained four hundred heads of animals from which the meat for the cheese was obtained, and evidently more or less decaying animal matter was present. The occupation and surroundings of this family afforded sufficient explanation of the fact that so many were attacked. Two workmen contracted the disease within about one week of each other, and were removed from the house. Four weeks after the commencement of the malady in the workman who was first attacked, on January 26th, one child sickened with it, and died on February 1st. Fifteen days subsequently (February 16th) a second child was attacked by it, and after a tedious sickness finally recovered. The long and irregular intervals between these cases indicate that the disease was not contracted by one from the other. The important factor in causing so severe an outbreak of cerebro-spinal fever in this family was probably the miasm produced by such an occupation in the house where the family resided, with neglect of ventilation and cleanliness.

But the strongest evidence that cerebro-spinal fever is either non-contagious, or very feebly contagious, is afforded by the fact that a large majority of the cases occur singly in families, although there is no isolation of the patients. The following are the statistics relating to this point of the cases which I have observed since cerebro-spinal fever commenced in New York, in 1871: Single cases occurred in seventy families; dual cases occurred in nine families; three cases occurred in one family, and four cases in one family. Intercourse with the sick room was unrestricted in all these families, so that children frequently went out and in, and sometimes assisted in the nursing.

The most striking example of apparent contagiousness which has come to my knowledge was related by Hirsch, and is quoted by von Ziemssen. A young man sickened with cerebro-spinal fever on February 8th. The woman who nursed him returned to her home in a neighboring village and there died of the same disease on February 26th. To her funeral mourners came from a neighboring township, and after their return home three of them died with the same disease, one within twenty-four hours, another on March 4th, and a third on the 7th.

In one instance only in my practice did the facts point to contagiousness. A boy of twelve years died of cerebro-spinal fever and was buried on Saturday or Sunday. On Monday the mother washed the linen and bed-clothes of the boy, which had accumulated and were in a very filthy state. Two days subsequently she was attacked, and her infant soon afterward, both perishing. The state of the bedding and apartments in this house, as seen by myself, was such as would be likely to concentrate and intensify the poison, rendering it peculiarly active, for they were very dirty, and the mother, exhausted by her long and incessant watching and lack of sleep, and depressed by grief, rendered her system more liable to the disease by her self-imposed duties on the day after the funeral. One in her state of mind and body, standing for a considerable part of a day over the bed-clothes and bedding of her child, soiled by the excreta, would certainly be in a condition to contract the disease if it were in any, even the lowest degree, contagious. In the present state of our knowledge, therefore, upon this important subject, the evidence leads us to believe that with proper ventilation and cleanliness, and the suppression of anti-hygienic conditions in an infected domicile, those who are in a good state of body and mind will not contract the disease, but in the opposite conditions it is not improbable that the poison may be so intensified, and the system rendered so liable to receive the prevailing malady, through impairment of the general health and diminished resisting power, that cerebro-spinal fever may, though rarely, be communicated either by the breath of the patient, or by exhalations from his surface, or from the soiled clothing. If so, it of course possesses a low degree of contagiousness.

The occurrence of cerebro-spinal fever in certain of the lower animals is a very interesting fact, especially as the question is sometimes asked whether it may not be communicated from them to man. In the epidemic of 1811 in Vermont, according to Dr. Gallop, even the foxes seemed to be affected, so that they were killed in numbers near the dwellings of the inhabitants. Cerebro-spinal fever, previously unknown in New York City, began, as stated above, in 1871, among the horses in the large stables of the city car and stage lines, disabling many and proving very fatal, while among the people the epidemic did not properly commence till January, 1872, although a few isolated cases occurred in December of 1871. No evidence exists, so far as I am aware, that the disease was, in any instance, communicated by these animals to man. Those who had charge of the infected horses, as the veterinary surgeons and stablemen, did not contract the malady, certainly not more frequently than others who were not so exposed. Although we may admit slight contagiousness, there has probably been no well-established example of the transmission of cerebro-spinal fever from animals to man. If transmission ever do occur it is so rare that practically no account need be made of it.

In some instances we are able to discover an exciting cause. An individual, whose system is affected by the epidemic influence, may perhaps escape by a quiet and regular mode of life, but if there be any unusual excitement, or the normal functional activity of the system be seriously disturbed, an outbreak of the malady may occur. Among the exciting causes we may mention over-work and lack of sleep, fatigue, mental excitement, depressing emotions, prolonged abstinence from food followed by over-eating, and the use of indigestible and improper food. Thus in one instance among my cases, a delicate young woman, at the head of one of the departments in a well-known Broadway store, was anxious and excited, and her energies overtaxed, at the annual reopening. Within a day or two subsequently the disease began. Another patient, a boy, was seized after a day of unusual excitement and exposure, having in the meantime bathed in the Hudson when the weather was quite cool. Those children have seemed to me especially liable to be attacked who were subjected to the severe discipline of the public schools, returning home fatigued and hungry and eating heartily at a late hour. In one instance which I observed, a school girl, ten years of

age, returned from school excited and crying because she had failed in her examination and had not been promoted. In the evening, after she had closely studied her lessons, the fever began with violent headache.

Dr. Frothingham (*Amer. Med. Times*, April 30, 1864) writes as follows of the brigade in which cerebro-spinal fever occurred in the Army of the Potomac: "Under General Butterfield, a stern disciplinarian, . . . the men were drilled to the full extent of their powers, often to exhaustion. I did not at the time recognize this as the cause of the disease in question, but I learnt that in the present epidemic in Pennsylvania the attack generally follows unusual exertion and exposure to cold."

Many observers have noticed that bodily fatigue and mental depression and excitement are important factors in causing an attack of cerebro-spinal fever, when this disease is epidemic. Dr. Gallop, in his history of cerebro-spinal fever, as it occurred in Vermont in 1811, directs attention to the severity of the cases among the troops under General Dearborn, who were fatigued by marches and greatly dispirited on account of a repulse which they had sustained from the British. In one case, which occurred in my practice, a boy, six years and eleven months of age, was punished at school and came home with cheeks flushed from excitement, the excitement continuing during the ensuing night. On the following day cerebro-spinal fever began with vomiting and chilliness, the attack ending fatally on the seventeenth day. In another case, which was related to me by the mother and the physician, the patient, a bright girl, twelve years of age, of nervous temperament, and forward in her studies, had been much excited in competing for a prize in athletic exercises. In the evening of the same day a violent thunder-storm occurred, and after a severe clap she started from bed, pallid and excited, and expressed the belief that she had been struck by lightning. The disease began immediately after this, and terminated fatally on the fifth day.

Sex.—It is stated by certain writers that more males are affected than females. The statistics of hospitals and camps show this; for men subject to lives of hardship are especially liable to be attacked, but in family practice, in which a large proportion of the patients are children, the number of males and females is about equal. Thus in 105 cases, occurring chiefly in my practice but a few of them in the practice of two other physicians of this city, I find that 59 were males and 46 females. Ninety-one of these were children. In New York City, during the epidemic of 1872, 905 cases of cerebro-spinal fever were reported to the Health Board between January 1st and November 1st, and of these 484 were males and 421 females. Dr. Sanderson's statistics of the epidemic in the provinces around the Vistula, the cases being chiefly children, give also but a slight excess of males. Probably, therefore, in the same conditions and occupations of life the sexes are equally liable to contract this malady, and the excess of males is due to the fact that they lead a more irregular life, and are more subject to privations and exposures. That soldiers on duty or in barracks have been attacked while families in the vicinity escape, thus increasing the proportion of male cases, must be due to irregularities, hardships, and perhaps the lack of sanitary regulations in their mode of life.

Age.—Children, as already stated, are much more apt to contract cerebro-spinal fever than adults. The following are the statistics of the N. Y. Health Board relating to the age of the cases during the epidemic of 1872:

Under 1 year	125
From 1 to 5 years	336
From 5 to 10 years	204
From 10 to 15 years	106
From 15 to 20 years	54
From 20 to 30 years	79
Over 30 years	71
Total	975

In the cases which occurred in my own practice, and in a few cases in the practice of other physicians added to mine, I find that the ages were as follows:

Under 1 year	16
From 1 to 3 years	27
From 3 to 5 years	25
From 5 to 10 years	20
From 10 to 15 years	10
Over 15 years	15
Total	113

In my practice, therefore, three-fourths of the cases have been under the age of ten years, and the statistics of epidemics in other localities correspond with mine in giving a large excess of cases in childhood. Thus Dr. Sanderson, in examining the records of deaths in one epidemic, ascertained that two hundred and eighteen had perished under the age of fourteen years, and only seventeen above that age; and although this does not show the exact ratio of children to adults in the entire number of cases, it is evident that the children were greatly in excess.

The more advanced the age after the tenth year, the less the liability to this malady, so that very few who have passed the thirty-fifth year are attacked, and old age possesses nearly an immunity. In New York City, in which, as we have seen, cerebro-spinal fever has been occurring since 1871, only two cases have come to my knowledge which had passed the fortieth year. The age of one was forty-seven, and the other sixty-three years.

(To be continued.)

A CONTRIBUTION TO THE STUDY OF PARKINSON'S DISEASE—ANOMALOUS CASES WITHOUT TREMOR.[1]

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A VERY common fault in our text-books and treatises on pathology and the practice of medicine, both general and special, is the tendency to delineate disease by the narration of *typical* cases, often to the complete exclusion of a proper notice and description of the *atypical* cases which form the bulk of one's practice.

An attempt to make all cases conform to a rule results in the parading before the student of "pathognomonic" symptoms, upon the recognition of which the case can be properly *labelled* and diagnosed; and too often, as a result, the diagnosis and not the pathological condition forms the basis of treatment.

This paper is an attempt to call the attention of the profession to anomalous cases of a very common malady, Parkinson's disease. With Charcot,[2] I think this a more appropriate name than paralysis agitans, for the reason that loss of power is really one of the latest symptoms to appear, and very seldom amounts to true paralysis. Charcot's words on this point are interesting: "It is, in short, strange to give the name of paralysis to an affection in which, for a long time, the muscular force is retained. The use of the word 'paralysis' is unjustifiable, because it annoys patients, and leads them to suppose they have some grave organic lesion which menaces their intellectual faculties.

"The qualifying 'agitans' added to the word 'paralysis' is not absolutely exact—at least applied to certain forms which, notwithstanding their being very striking, and the diagnosis rigorously established, lack the tremor."

Parkinson's[3] definition of the disease was "involuntary tremulous motion, with lessened muscular power in

[1] An abstract of this paper was read before the American Neurological Association, June 21, 1883.

[2] Leçons sur les Maladies du Système Nerveux faites à la Salpétrière. Tome 1. Troisième édition. Paris, 1877.

[3] Essay on the Shaking Palsy. London, 1817.

parts not in action, and even when supported, with a propensity to bend the trunk forward, and to pass from a walking to a running pace, the senses and intellect being uninjured." [1]

A well-developed case of Parkinson's disease presents the following symptoms: A bending forward; a rigidity of the articulations, with a tendency to fixation in flexion; tendency to propulsion; motionless attitudes; deliberate movements; slight general weakness; rhythmical tremors, which are made worse by emotions or excitement of any kind, are not made worse by voluntary movements, can generally be temporarily stopped by an effort of the will, and cease during sleep or artificial anæsthesia; an hypertrophy of the muscles affected; a peculiar deformity of the hand, fingers not flexed on themselves, but semiflexed on the hand, and thumb opposed to the index; staring and half-smiling expression; immobility of the face; speech slow and between the teeth; voice apt to be "piping"; a sensation of heat; aching pains; emotional state; fair preservation of intellect.

Diarrhœa is a very common symptom of typhoid fever, nevertheless we see cases that run their course without it, having, however, all the other symptoms of the disease. We do not create a new name for these cases but simply designate them as *atypical* cases.

As there are cases of typhoid fever without diarrhœa, so there are cases of Parkinson's disease without tremor. The first to call attention to this was Charcot, who, in a clinical lecture, November 10, 1876, presented a woman who had had for many years all the symptoms of paralysis agitans, without any tremor. In the course of his remarks on Parkinson's disease, he said: "There is an abortive form in which the tremor is so slight that it exists unnoticed by the patient, or it appears only after the lapse of three or four years, or it is entirely wanting." These remarks inspired Boucher's thesis,[2] which contains the narration of seven cases of Charcot's "forme fruste," three of which had no tremor at all. Only one of these is reported at length and it is taken bodily from Charcot's work.[3]

The only other case I can find reported is in Buzzard's book.[4]

The recorded cases are so few I may be pardoned in presenting abstracts of them.

Case I. (Observation of Charcot.[5])—Female, about forty, a teacher of gymnastics in an establishment for hydrotherapy. At the age of twenty she had an attack of acute articular rheumatism, a little later a typhoid fever, and still later a pneumonia. Of late she began to have an indefinable malaise, felt stiff, was less active, and felt incapable of making quick motions. One day while mounting a ladder there came a sharp pain in the left leg with a fidgety feeling in the toes. There followed dull pains, accompanied by muscular rigidity, occurring from time to time in the nucha, loins, and shoulders. During the six months preceding her visit to Charcot the patient was annoyed by the collection of vast quantities of saliva in the mouth. (This phenomenon was checked by the administration of .004 to .005 lb. of hyoscyamine a day.) The patient's attitude is particularly stiff, the walk slow and difficult, and there is a tendency to go to the left side. Rising is slow and hesitating. Both while at rest and walking the head is immobile and slightly flexed. The features are immobile, the eyes fixed, the lips pressed. Speech is slow, weak and has a nasal twang. The arms are approximated to the body, a little rigid in semi-flexion. The fingers are slightly flexed, the wrists a little extended, and this attitude cannot be altered without an effort. There is no tremor of the hands. The writing is free from tremor but is done only with extreme slowness and difficulty; on the execution of some movements, such as taking a handkerchief from the pocket, a few rhythmical jerks of the fingers are noticed.

Case II. (Observation of Buzzard[1].)—A male, aged sixty-four; a hard-working upholsterer's foreman. With the exception of typhus fever when young and a slight annoyance from gravel, he had enjoyed good health. Two years before he consulted Buzzard he found difficulty in using his knife and fork and in putting on his clothes. Four months later he began to drag his feet in walking, and gradually power was lost more and more completely in all his limbs. For a year he had been in bed, for nine months his arms and legs had been stiff, and for six months he had noticed that they tended to stay in any position they were put longer than was natural. For six months his speech had been thick. When first seen he was found helpless in bed. He had an aspect of marked mental hebetude. The speech was almost unintelligible. The face is stolid. The tongue is straight, protruded slowly, but is not tremulous. The fingers are flexed, deviate toward the ulnar side, and the distal phalanges are rather over-extended. Flexion and extension of the fingers and forearms is possible but slow. The limbs tend to remain in any position they are put. The upper extremities are emaciated, the lower flabby. The joints of the lower extremities are stiff and movements are very limited. The patella tendon-reflex is small; there is no ankle clonus, but skin reflexes are present. The right pupil is smaller than the left; both react to light.

In commenting on this case Buzzard [2] says: "These represent the principal symptoms of a condition which is manifestly of an unusual and obscure character. I have been led to conclude that the patient represents an anomalous form of paralysis agitans, partly by the necessity of excluding other explanations, and partly by the resemblance of the patient's state to that which would be produced by an intensification of certain symptoms of shaking palsy." Again,[3] "It is very probable that such cases as this man's are not so rare as might be thought. Looking back to past experience, I am disposed to think that I have seen several such in workhouses and hospitals, where they have been classed with cases of softening of the brain."

Axenfeld [4] says: "In certain cases the disease is '*fruste*' by the complete absence of one of the important phenomena, the tremor. Sometimes it is the rigidity of the muscles which predominates, and it gives to the body a characteristic attitude. . . . We have observed three cases of atypical paralysis agitans: in one the rigidity of the muscles of the neck was so intense that torticollis or disease of the cervico-dorsal spine was suspected; in the second case the flexion of the trunk was so marked that the body was as if folded up; the third case, aged sixty-nine, had had symptoms of Parkinson's disease for fifteen years. Fixed attitude, 'soldering' of the vertebræ, stooping position, thighs, legs, and forearms semi-flexed. Hands deformed. Expressionless, dull physiognomy. Eyes widely open, haggard, and fixed, giving an expression of constant surprise to the upper part of the face while the lower part looks sad. Saliva almost all the time dropping from the half-open mouth; lower lip pendant; slow walk; slow ideation; speech scarcely intelligible because of the difficult movement of the tongue, the muscles of which seem rigid; some dysphagia from rigidity of muscles of the pharynx and soft palate." Axenfeld adds, however, that this latter patient, when *irritated* or *angered*, had, for the time, "a tremor hardly perceptible."

I have seen in the last year four cases which I considered Charcot's "forme fruste" of Parkinson's disease.

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[1] Clinical Lectures on Diseases of the Nervous System, by Thomas Buzzard, M.D., p. 329. Philadelphia, 1882.

[2] De la Maladie de Parkinson et en particulier de la Forme fruste. Par A. Boucher. Thèse de Paris, 1877.

[3] Leçons sur les Maladies du Système Nerveux. Tome 1. Troisième édition. Appendix, p. 399. Paris, 1877.

[4] Loc. cit., p. 336.

[5] Loc. cit.

[1] Loc. cit., p. 336. I have not reported this case in full.—R. W. A.

[2] Loc. cit., p. 338.

[3] Loc. cit., p. 343.

[4] Traite des Névroses, par A. Axenfeld. Deuxième édition, augmentée par Henri Huchard, p. 691. Paris, 1883.

CASE III. (Personal observation.)—A female, aged fifty-three, consulted me June 2, 1883. Her menses had ceased eleven years before. She had always worked hard at washing. Four years ago she had trouble with her daughter-in-law, and as a consequence had a falling-out with her son, of whom she was very fond. This worried her day and night, and she became sleepless over it. At that time a progressive weakness of the legs was first noticed, which is so great at times now that she cannot rise or walk about. Two years ago her voice began to fail, so that at times, now, she can only talk in a whisper. Shortness of breath and palpitation of the heart appeared about the same time. She feels very well at night, but notices that she requires less covering on the bed than formerly. She has a great deal of pain in the left axillary line and some in the right elbow. She is afraid of falling if she turns suddenly. She is annoyed much by a collection of phlegm in the throat, which is very difficult to raise. In the last year her eyesight has failed much, and it is hard work to keep her eyes open. She thinks her memory has failed; her movements are very slow, and instead of turning on the heel she takes three or four steps in reversing her course. Her posture is stooping and rigid. Her face is staring and half smiling; while speaking her lips move very little, especially the upper. Her speech is mumbly and monotonous. The grasp, as tested by the dynamometer, was weak on both sides, but the difference between the two sides was normal. The sensibility was unimpaired. The pulse was 104; vision perfect; her optic nerves were normal. She was ordered .0006 of crystallized hyoscyamine, three times a day.

July 10th.—She is sure the medicine has relieved her. Says if she never gets any better she will be satisfied. Her voice is quite strong, and she takes great pride in showing how quickly she can turn in walking.

August 17th.—Has had no medicine for two weeks. Her voice is almost extinct, and she does not walk as well as before.

She never complained of dryness of the throat or dim vision from the drug, but it invariably overcame her sleepy feeling, strengthened her voice, and improved her walk. After four months' observation the case remains in exactly the same condition; instantly relieved by hyoscyamine. Neither now nor at any previous time has there been any tremor.

CASE IV. (Personal observation.)—Male, aged sixty-two, a glazier by trade, consulted me in November, 1883. He had seen active service through the whole war and used to be of intemperate habits. He was perfectly well up to three years ago, when he lost his wife (as he says, a great shock to him), and about that time became suddenly weak and could talk very little, and sank into an apathetic condition from which he has never been aroused. He has occasional frontal headaches. His eyesight has failed, and he feels sleepy all the time. Still, he does not sleep much except at night. He has a very slow, uncertain walk, during which he stoops. All his movements are slow, particularly sitting down and rising. He has no paralysis or tremor. His face is staring and immobile, hardly expressive of anything except stupid surprise. He seldom volunteers any remarks, but in answer to questions he speaks slowly and through a half-open mouth. The voice is feeble. He has no nystagmus nor optic neuritis.

When I first saw him I considered his apathetic mental state bordering on dementia. Experimentally I ordered him .0006 of crystallized hyoscyamine twice or three times a day. When he returned in two days his whole being was changed; he walked briskly, volunteered information as to his condition in quick, distinct tones. His expression was intelligent. This improvement will be only temporary, of course, but it would hardly be expected to occur in an ordinary case of dementia.

CASE V. (Personal observation.)—A female, aged sixty, consulted me October 5, 1883. She had always been dyspeptic, had passed the menopause at forty. Eighteen months ago she lost her daughter suddenly, and immediately a tremor set in in the right hand. The right arm and leg were weak and there was a pain about the right shoulder. The tremor was of the greatest intensity at first and gradually vanished. The pain is still sometimes present and the hand and foot remain weak. When excited now a very fine rhythmical tremor can be felt by patient in the hand. The eyesight has failed much in last three years (presbyopia); the voice has become monotonous and weaker. She has a sleepy, heavy feeling in the eyes almost all the time. Her memory is good. She has a staring immobile facies, she walks slowly, leaning forward; all her movements are slow, as is her speech, which is indistinct. The tongue points a little to the right side, the right hand is weak, the optic nerves normal. She also improved under the use of hyoscyamine, is still under observation, and so far I have never seen any tremor.

CASE VI. (Personal observation.)—A male, aged forty-eight, consulted me May 29, 1882. Does not give a clear history, but complains of general debility, nervousness, aching pains, and an inability to keep eyes open. He denied alcoholic excess. His movements were slow, and his walk stiff and stooping. His facies was immobile and dull and his eyes staring. His speech was slow and mumbly. He would sit motionless, and if left to himself his eyelids would droop and remain closed in a tremulous condition. In this state he did not sleep but yielded to an irresistible impulse to close his eyes.

TUBERCULOSIS AS PRODUCED BY SPRAYED SPUTA.[1]

BY LOUIS D. BROSE, M.D., PH.D.,

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GENTLEMEN: my object in undertaking these experiments was to convince myself as to the infectiousness of tuberculosis. Were I asked to express my opinion previous to this research, I should have registered against anything specific in its production. This would not have been simply from literature, for I was so associated with Dr. O. C. Robinson while he conducted by inoculation his experimental researches on tuberculosis [2] in the Pathological Laboratory of the University of Pennsylvania, that I was almost as firm a believer in his results as he himself. The following method may be briefly stated as the manner of procedure in my investigations: Animals known not to be scrofulous or to easily acquire tuberculosis spontaneously, such as the cat and dog, were confined either in a large box, which was then placed in a room, or else they were allowed to run free in the room itself. Sputum was taken from patients known from a thorough physical examination to have phthisis.

Several of these patients have since died and the diagnosis verified by autopsy, so there can be little doubt but that the source of my material was from consumptive persons. The sputa were either placed in the bottle of an ordinary hand-spray, or else first made into a thin emulsion by admixture with an equal portion of water, and the animals sprayed during a period of five minutes for five consecutive days. As a self-protector, I invariably made use of an inhaler of borated cotton, the meshes of which were filled with powdered boric acid.

The spray was directed as far as possible toward the animal's nose. In every instance careful attention was paid to a proper and regular supply of food and water during the period of confinement, and the animals were finally killed at various dates by Scheele's hydrocyanic acid. I was aided in examining the organs macroscopi-

[1] Read before the Medical Society of the Mississippi Valley, at Indianapolis, Ind.

[2] See abstract Philadelphia Medical Times, vol. xii., p. 130.

cally by Dr. William Folsetter, a veterinary surgeon of much ability and a gentleman highly interested in the research.

For a better understanding, the experiments may be described under three series. The first series will include those animals sprayed with phthisical sputa and then killed before the expiration of ten days since the first spraying. April 25th a large cat was confined in a box, placed in a well-ventilated dissecting-room, and sprayed with three ounces of sputa. On the 26th and 27th sputa was again sprayed into the box. During the afternoon of the 27th she had a litter of five kittens. These were apparently at full term, and cried on my shaking the box. April 28th, besides the spray, a lot of old and very offensive sputa was poured into the box among the kittens. In the afternoon of the 29th all the kittens were found dead in the box, and the mother missing. Next day she was also found dead in the bottom of a stove in the dissecting-room.

Macroscopically and *microscopically* the lungs and other organs of the kittens were normal, well formed, and without evidence of irritation or inflammation. Death apparently occurred from inanition.

The lungs of the mother were emphysematous at the edges, slightly congested, but otherwise healthy. Spleen and liver normal in appearance. The uterus was firmly contracted, and with the exception of a congestion of the ovarian blood-vessels was without evidence of disease. Death probably occurred from septicæmia. A thorough microscopical examination did not reveal sufficient changes in any of the tissues to call them diseased.

In the second series I will place those animals sprayed with sputa, and under observation for a period of from eighteen to twenty-seven days. April 16th a grown English bull-dog bitch was confined in a box placed in a room 9 by 6 feet, and sprayed with sputa made into a thin emulsion by the addition of water. April 17th she had escaped from the box into the room, was replaced and again sprayed with some three ounces of fluid. April 18th she again escaped, and I now permitted her to remain free in the room, into which the spray was directed the three following days, besides scattering much offensive sputa over the floor. May 7th, just twenty-one days since using the first spray, the animal was killed by a hypodermic injection of Scheele's hydrocyanic acid. Death occurred within two minutes.

Autopsy.—The general body considerably emaciated. Left lung throughout is invaded by gray miliary tubercle, most numerous in the apex. The pleura covering the lung is also involved. Right lung and pleura affected in a similar manner, the tubercles being, if anything, more numerous. Bronchial glands at the root of the lungs greatly enlarged, and on section present a pigmented appearance with islets of yellow discoloration. Spleen enlarged and softened. Kidney and liver normal.

May 11th three kittens were placed in a box and kept in a well-ventilated, clean vacant room. They were sprayed on two of the five occasions by fluid exuded from the cut surface of a highly tuberculous and consolidated lung. The animals were fed on milk daily during their confinement. May 30th, after the lapse of eighteen days, one of the kittens was found dead in the box.

Autopsy.—Miliary tubercles in small numbers were present in both lungs, involving also the pleura slightly. Macroscopically the other organs were normal. June 12th the remaining two kittens were killed, and the lungs found to be highly infected. Aggregations existed in many places, forming large tubercular nodules, ready to soften and advance to the stage of cavity formation. The pleura was inflamed over the nodules and adherent to the underlying tissue. Liver softened, otherwise healthy in appearance. Spleen and kidney normal.

May 11th a strong healthy dog was placed in a room 9 by 6 feet and sprayed with the exuded matter from a phthisical lung; sputa was also scattered over the floor. June 14th, thirty-two days since confinement, the animal was killed by hydrocyanic acid. Both lungs with the pleura contained many disseminated miliary tubercle. The spleen, liver, and kidneys were without traces of inflammation and apparently healthy.

The microscopical appearances of the viscera in this series, showing many points in common, I will describe collectively. Lungs: a lymphoid exudate occupies the lumen of many of the vesicles, and there is a tendency to thickening of the vesicle walls proper. Along with this new formation of granulation-like tissue is observed a catarrhal proliferation of the epithelium lining the air-cells. All the vesicles are not uniformly filled, as in an ordinary croupous pneumonia, but some remain empty and have their lumen encroached upon by the distended adjacent vesicles. In experiment four, the lesions approach nearest a croupous pneumonia, and some of the bronchioles on cross-section are seen filled by this same granulation element, while in the larger tubules a catarrhal proliferation is seen. Few giant-cells were observed. The bronchial glands in experiment one showed granulation tubercle. In sections of the spleen from experiment five, stained by W. D. Babcock according to Gibbe's rapid method, tubercle bacilli were detected, although no tubercular nodules were present. The other organs showed few if any abnormal changes.

The third series embraces seven control experiments. These were undertaken to further convince myself that the lesions produced were not due to simply a mechanical irritation of the inhaled particles suspended in the sputa. Animals were placed under the same conditions as those in the preceding experiments, but instead of spraying them with sputa I used the normal healthy brain of a sheep or cow, rubbed up with water into an emulsion. This, after being kept twenty-four hours, became as offensive as sputum.

June 11th.—Two kittens were confined in a box and then placed in a closed room. They were sprayed on five consecutive days with the brain of a sheep taken some two hours after death. July 5th, twenty-four days since using the first spray, they were anæsthetized and killed.

Macroscopically and *microscopically* there were no perceptible changes or signs of irritation in either the lungs, pleura, liver, or kidneys. August 18th five kittens were placed in a room 16 by 12 feet and sprayed with the brain of a cow. They were fed daily upon milk. Besides the spraying, quantities of brain matter were scattered over the floor. August 29th three of the kittens were found dead. A thorough examination did not reveal the presence of tubercle in any of the organs, death resulting probably from heat exhaustion, as the windows were kept closed and the temperature of the room was very high. September 8th, twenty-one days since the first spraying, the two remaining kittens were killed.

Autopsy.—Lungs crepitate, are perfectly healthy and normal in color; spleen and liver normal in size. Microscopically the healthy appearances noted at the autopsy are corroborated.

The first to investigate this disease by experimental observation was Villemin, of France, who in 1867 inoculated rabbits with tubercular matter, and established the fact that in the lower animals morbid changes, constant in their anatomical appearances and development, followed; that these changes were to be regarded as constituting the disease tuberculosis. Then followed Waldenburg in the same year[1] with a paper wherein he states that in some animals, especially the rabbit, the inoculation of finely powdered innocuous substances also gave rise to tuberculosis. Cohnheim and Frankel, in two repetitions of Waldenburg's work,[2] arrive at a different conclusion. In their first series, conducted in the Pathological Institute in Berlin, they confirmed his results;

[1] Treatise on Tuberculosis, Phthisis, and Scrofulosis.
[2] Virchow's Archiv, vol. xlv.

while in the second series, conducted in another locality, they could only produce the anatomical changes of tuberculosis by the inoculation of tubercular matter itself. They now regard the disease as infectious, and explain their first result as due not to the inoculation but rather to infection through other tuberculous animals in the same institution. These experiments have since been repeated by a number of observers, and with various results. Those who hold that tuberculosis alone follows the inoculation of tuberculous matter contradict the negative party by calling their experiments unreliable and open to the errors of either the admixture of tubercular with indifferent material or else spontaneously acquired tuberculosis. The first to produce the disease experimentally by inhalation was Tappenier, in 1877. Unfortunately I have not been able to see his original paper, but from an editorial in the *Medical News*, May 5, 1883, learn that his results closely coincide with my own. In his first four experiments he used sputa from fresh tubercular cavities rubbed up with a good deal of water into a thin emulsion, and permitted dogs to inhale it from a steam atomizer, the animals being enclosed in airy cages and protected from dust. The exact method and conditions of the remaining experiments he does not describe, but in all he records 31 inhalation experiments with dogs, of which 18 were true infection experiments with tubercular sputum, 8 control experiments with other substances, and 5 experiments with tubercular sputum with a view to determining the period of incubation. In all the 18 experiments the results were positive. In 17 there was tubercle in both lungs and pleura; 4 times in addition to the tubercles in the lungs there were tubercular nodules in the kidneys, spleen, and liver, and in 3 instances in addition to the tuberculosis of the lungs there were also cheesy foci and small cavities. In one instance only there was typical desquamative pneumonia. Of the 8 control experiments, 2 were made with calves' brain, treated in the same way as the tubercular sputum; 2 with the suppurative expectoration of a chronic bronchitic patient, and 4 with cheesy pus from lymphatic glands. All the 8 control experiments were completely negative, there being no trace either of tubercular nodules or of irritation of the lung by the finely divided particles. In the 5 control experiments, in which sputum from tubercular cavities was inhaled, the animals were killed in from ten to twenty days after the beginning of the inhalation, and none of them showed any trace of tuberculosis or other symptoms of irritation of the lung, although large quantities of sputum had been inhaled.

From these experiments he concludes that the period of incubation cannot be less than twenty days, and since, also, all the dogs killed in more than twenty-four days from the beginning of the experiments, excepting the single one with desquamative pneumonia, were tuberculous, it would appear that the inoculation effects developed themselves within the short period of four days. My own success in five infection experiments fully corroborates his eighteen positive results. Furthermore, my observation is that the more concentrated the spray and the greater the saturation of the inhaled atmosphere, the greater the degree of infection and development of tubercle in the animal under experiment. Our control experiments are wholly in unison; in neither case was there a trace of inflammation or irritation in the viscera of the experimented animals.

Spina,[1] in publishing his studies on tuberculosis, quotes a Dr. Knauff as having obtained true tubercles in the lungs of animals by having them inhale coal-dust; also a Dr. Inis as producing the same lesions by inhalation of stone-dust and lamp-black. That certain morbid appearances may thus be produced in the lung I think will be conceded by all when it is remembered that in granite-masons, coal-miners, knife-grinders, and others exposed to the inhalation of mechanical irritants, bronchial affections occur, often attended with fibroid induration and disease of the lung itself closely resembling pulmonary consumption. But that such inflammatory nodules are true tubercle is a matter of much doubt. Dr. A. Weichselbaum,[1] who has lately experimented upon this subject, concludes that the inhalation of other organized though non-tuberculous substances may produce nodules in the lungs, which may, it is true, have the external signs of tubercles, but which cannot positively be identified as tubercles. The inhalation of tuberculous sputum produces in dogs a true miliary tuberculosis of the lungs and frequently of other organs, but which seems to have no progressive character. My friend and former teacher, Dr. Henry F. Formad, of Philadelphia,[2] offers to explain the success of all inhalation experiments on the ground that the epithelium lining the air-vesicles approaches very closely in histological character the lining of the serous membranes—in fact it is considered by some to be endothelial. Now, according to his paper true tuberculosis can be produced even in non-scrofulous animals through simple injuries of serous membranes. Hence the spray simply acts in the capacity of setting up an inflammatory irritation, and in consequence of a too rapid absorption of the inflammatory exudate, we have here a blocking up of the lymph spaces of the connective tissue by the fibrin and molecular débris which was suspended in the absorbed serum. From extended researches he announces that the predisposition to tuberculosis in some men and animals, the so-called scrofulous habit, lies in the anatomy of the connective tissue of the individual, the peculiarity being a narrowness of the lymph spaces and their partial obliteration by cellular elements; only beings with such anomalous structure of connective tissue can have primary tuberculosis, and such animals invariably do become tuberculous from any injury resulting in inflammation, or from repeated injuries.

Scrofulous beings can have no other than a tuberculous inflammation, although it may remain local and harmless. Non-scrofulous men or animals may acquire the predisposition to tuberculosis through malnutrition and confinement, the latter bringing on the above-mentioned anatomical peculiarities. No special virus or external etiological influences are necessary to cause tubercular disease other than those which ordinarily produce inflammation, and scrofulous beings will not become tuberculous unless local inflammation is set up.

If these views be correct, why did Tappenier in eighteen consecutive cases, and my own five cases of true infection experiments alone result in positive success?

The same irritation surely existed in the sputum used on those animals killed before the expiration of fifteen days, and yet in not a single instance did inflammation occur with subsequent blocking up of the lymph spaces. Again, the control experiments were certainly not without some irritating influence, and yet in no instance was there discovered a sign of tubercle in the lungs or pleura after death. Under these circumstances I feel justified in presenting the following conclusions:

First.—That tuberculosis may follow the inhalation of air-carrying particles of sputa from phthisical patients.

Second.—The breath and saliva of consumptive persons, being thus contaminated, are liable to originate, either through kissing or by direct inhalation through close contact, the same disease in a healthy person; the greater the concentration of the breath inhaled the greater the danger.

Third.—Since the same sputa in animals killed under ten days produced no disease, and since the healthy brain of other animals produced no disease, in cats even when under observation for a period longer than twenty days, while true tuberculosis always followed (in five of my own cases) the inhalation of tuberculous sputa in animals between eighteen and thirty days after the first spraying, I feel warranted in inferring that in the last

[1] Studien über Tuberculose, by Arnold Spina. Vienna, 1883.

[1] Medizinische Jahrbücher, 1883.
[2] Philadelphia Medical Times, November 18, 1882.

instance there was something specific in the inhaled spray requiring certain development before originating the infectious disease, tuberculosis. That it was alone the *tubercle bacillus of Koch*, I have not claimed. My own opinion regarding the origin of tuberculosis, formed from this research and a no inconsiderable clinical experience with the disease, is that, like diphtheria, it is ordinarily determined by certain peculiarities and susceptibilities in individuals, together with the presence of a specific principle. Now when a person who has this peculiarity of weak lungs, or in other words one in whom bronchial and catarrhal troubles are easily excited, has superadded the infection of tuberculosis, let it be in a minimum amount, we have arising true consumption running through its various stages. Even healthy persons can thus be infected when the specific matter is inhaled in large quantities, just as the poison in other infectious diseases will certainly produce these same diseases when inoculated in concentrated quantities in persons who would otherwise escape. The reason why we have acute disseminated miliary tuberculosis in one case, and a catarrhal phthisis in another, will depend upon the susceptibility of the individual to catarrhal cell-proliferation and whether the specific principle was superadded to an already existing catarrh, in which case the specific principle would reproduce itself easiest at the seat of tissue necrobiosis. If, on the contrary, there existed a proclivity against catarrhal processes, and the person was infected with a concentrated dose, so to speak, of the specific principle of tubercle, there might arise a disseminated miliary tuberculosis.

GOITRE—EXCISION—CURE.

By JOHN A. WYETH, M.D.,

SURGEON TO MT. SINAI AND ST. ELIZABETH HOSPITALS; PROFESSOR OF SURGERY IN THE NEW YORK POLYCLINIC.

September, 1883.—E. H——, female, aged sixteen, blonde, born in Virginia; resided there six months, six years in Pennsylvania, four in Washington City, and the last six years in Brooklyn, N. Y. Mother living and in good health. Father living; has had asthma, but for three years past has had no attacks. Three sisters living and healthy; one brother still-born.

Patient is in good health; menstruation, which began at fifteen, regular; great hypertrophy of right thyroid body; had scarlatina four years ago, accompanied with and followed by sore throat. Noticed the tumor at this time, which grew slowly for two years, then more rapidly, and in the last six months its growth became alarming.

October 10th.—Operation before the surgical class of the Polyclinic. Ether; incision over middle of tumor, parallel with and to right of median line; muscles pulled aside; all tissues divided between two of my hæmostatic forceps. Isthmus tied with elastic ligature, then superior and inferior thyroid arteries with antiseptic catgut, and tumor turned out. Operation one hour. Hemorrhage insignificant.

Tumor was about five inches long and twelve inches in transverse circumference. Wound washed out with hydrarg. chlorid. corrosiv., 1 to 2,000, and sewed up with silk. Drainage-tube and end of elastic ligature passed out of the most dependent portion. Carbolized gauze and borated cotton dressing.

October 11th.—Temperature, 101.8° F., declined gradually to normal on 21st. Wound healed per primam (excepting drain-hole). Elastic ligature came away on the 18th, and patient discharged cured on October 31st.

In The Record for January 28, 1882, p. 94, I have reported one other operation for goitre by myself, and added several more, to which any one interested in this subject is referred.

RECORD OF THE YELLOW FEVER IN THE UNITED STATES—1668–1883.

In looking up the history of the occurrence of yellow fever in the United States, we find that the annual reports of the Surgeon-General of the U. S. Marine Hospital Service and Public Health Bulletin published by that service contain records covering a period of over two hundred years, the first cases appearing in New York (City) in 1668. Briefly, the record is as follows:

New York (City) in 1668, 1702–32–41–42–43–45–47–48–62–90–91–92–93–94–95–96–97–98–99, 1800–01–02–03–05–06–07–08–09–10–15–16–17–18–19–20–21–22–23–24–25–26–27–28–29–30–32–33–34–35–38–39–43–44–46–47–48–52–53–54–55–72 (in quarantine)–73 (in quarantine and Marine Hospital wards, N. Y., and more or less cases in quarantine or Marine Hospital every year since).

New York (State)—Albany, 1746–98; Bay Ridge, L. I., 1856; Brooklyn, 1809–23–56; Brooklyn Navy Yard, 1878; Catskill, 1743–94 and 1803; Governor's Island, 1856–70; Gowanus, 1856; Greenfield, 1798; Huntington, 1795–98; Queensborough, 1801; Red Hook, 1856; Stapleton, 1848; Yellow Hook, 1856; Tompkinsville, 1848; West Point, 1804, and West Neck, 1795.

Alabama—Mobile, 1705–56–66, 1819–21–22–24–25–27–28–29–37–38–39–41–42–43–44–47–48–49–51–53–54–58–67–70–73–78; Blakely, 1822; Cahawba, 1853; Citronville, 1853; Decatur, 1878; Dog River cotton factory (five miles from Mobile), 1853; Demopolis, 1853; Fort Claiborne, 1819; Fort Morgan, 1867; Fort St. Stephens, 1819; Fulton, 1853; Hollywood, 1853; Leighton, 1878; Montgomery, 1853–54–55–73; Pollard, 1873; Selma, 1853; Spring Hill, 1853.

Arkansas—Columbia, 1853; Fort Smith, 1823; Grand Lake, 1853; Little Rock, 1873; Napoleon, 1853.

Connecticut—Chatham, 1796; Hartford, 1798, 1800; Knowles Landing, 1796; Middletown, 1820; New Haven, 1743–94, 1803–04–05–19; New London, 1798; Norwalk, 1798; Stamford, 1745; Stonington, 1798.

Delaware—Christiana, 1798; Duck Creek, 1798; New Castle, 1798; Wilmington, 1798.

Florida—Pensacola, 1764–65, 1811–22–25–27–34–39–41–42–43–44–45–46–47–48–53–54–58–63–67–73–82; Apalachicola, 1826; Barrancas, 1875; Cedar Keyes, 1871; Fernandina, 1877; Gainsville, 1871; Jacksonville, 1857; Key West, 1824–29–41–53–54–62–64–65–67–69–75–78; Milton, 1853–55; St. Augustine, 1807–21–38–39–41; St. Joseph, 1841; Suwanee, 1836; Tampa, 1839–53–71; Tortugas, 1862–67.

Georgia—Savannah, 1807–08–19–20–27–52–53–54–58–76; Augusta, 1839–54; Bainbridge, 1873; Brunswick, 1876: St. Mary's, 1808.

Indiana—Indianapolis, 1878 (refugee).

Illinois—Cairo, 1873–78.

Kentucky—Louisville, 1873–78; Hickman, 1878; Covington, 1878 (refugee).

Louisiana—New Orleans, 1769–91–93–94–95–96–97–99, 1800–01–02–04–09–11–12–17–18–19–20–22–23–24–25–27–28–29–30–31–32–33–34–35–36–37–38–39–40–41–42–43–44–45–46–47–48–49–50–51–52–53–54–55–56–57–58–62–63–64–67–70–71–72–73–75–78 (and more or less cases in quarantine every year since); Alexandria, 1819–22–27–31–37–39–47–53–54–55; Algiers, 1847–53–58; Ascension, 1823; Baton Rouge, 1817–19–22–27–29–37–43–47–58–78; Bay of St. Louis, 1820–30–78; Bayou Sara, 1847–53; Bonsecour, 1878; Burat Settlement, 1854; Carrollton, 1847–55; Centreville, 1853–55; Clinton, 1853–78; Covington, 1847; Clouterville, 1853–54; Delphi, 1878; Delta, 1878; Donaldsonville, 1827–39; Franklin, 1853–54; Fish River, 1878; Gretna, 1858; Grenwood, 1873; Hudson, 1878; Iberville, 1847; Jeannerretts, 1854; Jesuit's Bend, 1854; Lafayette, 1847; Lake Providence, 1853; Maudville, 1847; McDonoughville, 1858; Morgan City, 1878; Natchitoches, 1839; New Iberia, 1867–70; Opelousas, 1829–37–39–42–53–

67; New Orleans (a small settlement below New Orleans proper), 1854; Pattersonville, 1853-54-55; Plaquemine, 1837-39-47-53-58-78; Point a la Hache, 1854; Port Barre, 1870; Port Eads, 1878; Port Hudson, 1839-41-43-73; St. Francisville, 1811; Feliciana Parish, 1817-19-23-27-29-39-43-46-48-53; St. John Baptiste, 1853; St. Martinsville, 1839; St. Mary's Parish, 1854; Shreveport, 1853-73; South Pass, 1878; Southwest Pass, 1878; Thibodeau, 1853-54-56; Trenton, 1853; Vidalia, 1853; Ville Platte, 1870; Washington, 1837-39-52-53-54-67.

Maryland—Baltimore, 1794-95-97-98-99, 1800-01-02-05-19-20-21-22-68-79 (in quarantine); West River, near Annapolis, 1805.

Massachusetts—Boston, 1691-93, 1795-96-98, 1800-02-05-19-58-78 (in Marine Hospital); Holliston, 1741; Nantucket, 1763; New Bedford, 1800-01; Newburyport, 1796; Salem, 1798.

Mississippi—Biloxi, 1702, 1839-47-53-58-78; Bolton, 1878; Brandon, 1853-54; Canton, 1855-78; Clifton, 1853; Cooper's Wells, 1855; Crystal Springs, 1878; Dry Grove, 1878; Friar's Point, 1878; Grand Gulf, 1853; Greenwood, 1853; Jackson, 1853-54-78; Greenville, 1878; Granada, 1878; Handsborough, 1878; Hernando, 1878; Holly Springs, 1878; Lake, 1878; Lebanon Church, 1878; McComb, 1878; Meridian, 1878; Mississippi City, 1878; Moscow, 1878; Natchez, 1817-19-23-25-27-29-37-39-44-48-53-55-58; Ocean Springs, 1878; Pascagoula, 1847-53-78; Pass Christian, 1847-53-55-58-78; Petit Gulf, 1853 (thirty plantations near Petit Gulf); Rodney, 1829-43-47-53; Osyka, 1878; Port Gibson, 1878; Scranton, 1878; Shieldsborough, 1820-29-39; Spring Hill, 1878; Vicksburg, 1839-41-47-58-71-78; Washington, 1825; Water Valley, 1878; Whitzell's Landing, 1817; Woodville, 1844-52-53-55-58; Yazoo City, 1853.

Missouri—St. Louis, 1854-55-78 (refugees); New Design (twenty miles below St. Louis), 1797.

New Hampshire—Portsmouth, 1798.

New Jersey—Bridgeton, 1798; Gloucester, 1805; Perth Amboy, 1811; Port Elizabeth, 1798; Woodbury, 1798.

North Carolina—Beaufort, 1854-64-71; New Berne, 1799, 1864; Smithville, 1862; Washington, 1800; Wilmington, 1796, 1800-21.

Ohio—Cincinnati, 1871-73-78; Gallipolis, 1796, 1878; Dayton, 1878 (refugee).

Pennsylvania—Philadelphia, 1695-99, 1732-41-42-43-44-47-62-91-93-94-96-97-98-99, 1800-01-02-03-05-07-09-10-11-13-14-15-16-19-20-53-54-70-78 (refugee); Pittsburg, 1878 (refugee); Bald Eagle, 1799; Chester, 1798; Chester County, 1805; Kensington, 1793; Lisburn, 1803; Marcus Hook, 1798; Niltany, 1799; Southwark, 1793.

Rhode Island—Block Island, 1801; Bristol, 1795-96-97; Newport, 1806; Providence, 1794-95-97, 1800-05; Westerly, 1798, 1805.

South Carolina—Charleston, 1699, 1703-28-32-34-39-45-48-53-55-61-62-68-70-92-94-95-96-97-98-99, 1800-02-03-04-05-07-12-17-19-22-24-25-27-28-30-34-35-38-39-40-41-43-49-52-54-56-57-58-62-64-71; Beaufort, 1871; Columbia, 1854; Fort Moultrie, 1852-58; Georgetown, 1854; Hilton Head, 1862; Mount Pleasant, 1817-48-52-54-56-57.

Tennessee—Memphis, 1853-55-66-73-78; Brownsville, 1878; Chattanooga, 1878; Germantown, 1878; Grand Junction, 1878; Mason, 1878; Nashville, 1878; Milan, 1878; Paris, 1878.

Texas—Galveston, 1839-44-47-53-54-58-59-64-66-67; Alleytown, 1867; Anderson, 1867; Austin, 1867; Bastrop, 1867; Beaumont, 1863; Belleville, 1855; Brazoria, 1859; Brenham, 1867; Brownsville, 1853-58-62-82; Calvert, 1867-73; Chapel Hill, 1867; Columbus, 1873; Columbia, 1833; Corsicana, 1873; Corpus Christi, 1862-67-73; Cypress City, 1853-59; Danville, 1867; Edinburg, 1859; Goliad, 1867; Harrisburg, 1867; Hempstead, 1867; Hockley, 1853; Houston, 1839-44-47-48-53-54-58-59-64-70; Huntsville, 1867; Independence, 1867; Indianola, 1852-53-58-59-62-67; La Grange, 1867; Liberty, 1867; Liverpool, 1853; Matagoras, 1862-63; Millican, 1864-67; Navasota, 1867; Oldtown, 1867; Port Lavacca, 1867; Point Isabel, 1882; Richmond, 1853-59; Rio Grande City, 1867; Sabine City, 1863; Saluria, 1853; Sugarland, 1859; Victoria, 1867.

Virginia—Norfolk, 1747-94-95-96-97-98-99, 1800-01-02-03-04-05-21-26-52-54-55; Alexandria, 1803; City Point, 1798; Gosport, 1855; Hampton Roads, 1869; Petersburg, 1708; Portsmouth, 1852-54-55; Richmond, 1806 (78 refugees); Scott's Creek, 1855; Winchester, 1804.

Since the reorganization of the service in 1871-73 (when it was placed under a medical head), a large number of valuable papers on the subject of yellow fever have appeared in the reports. In the Annual Report of 1873, Dr. J. M. Toner, of Washington, D. C., contributed a paper entitled "The Distribution and Natural History of Yellow Fever as it has Occurred at Different Times in the United States." In the same Report may be found yellow fever notes by the late Surgeon-General Woodworth and Surgeons Hebersmith, Orsamus Smith, P. H. Bailhache, Dr. J. S. Mosher, Deputy Health Officer of the port of New York, Dr. G. B. Thornton (at that time in charge of Marine Hospital patients, Memphis, Tenn.), Dr. O. L. Crampton (in charge of Marine Hospital patients, Mobile, Ala.), and Dr. H. Wardner (in charge of Marine Hospital patients, at Cairo, Ill.).

In the Report of 1874 is a paper by Dr. James S. Herron, of Pensacola (Surgeon in charge of Marine Hospital patients at that time), giving the history of yellow fever at Pensacola in 1874, and another by Dr. Frank W. Riley (late Surgeon of the Marine Hospital Service), giving a history of the epidemic in 1873 at Pensacola, New Orleans, Memphis, Shreveport, Mobile, Cairo, Ill., Greenwood, La., Calvert, Tex., Montgomery, Ala., Fort Barrancas and Jefferson, Fla. This Report was prepared under the supervision of the late Surgeon-General Woodworth, by direction of the Secretary of the Treasury, in compliance with the following preamble and resolution of Congress:

Whereas, Yellow fever has again prevailed during the past year as an epidemic of frightful severity in some of the cities and towns of the United States, paralyzing trade and commerce throughout large sections of country by impeding travel and menacing neighboring communities; and

Whereas, Many cities equally exposed with those which suffered most severely escaped with slight mortality, indicating that certain conditions and measures may control or arrest the spread of the epidemic; and

Whereas, The history of the disease tends to show that it is almost uniformly introduced into the United States by seamen already infected with the contagion, or arriving from ports where the disease exists; and

Whereas, The United States Marine Hospital Service, through its medical officers at the ports where the epidemic prevailed, was enabled to become familiar with the course of the disease, the conditions favorable to its introduction and progress, and the measures which were successful in controlling or checking it; therefore

Resolved, That the Secretary of the Treasury be, and hereby is, directed to instruct the Supervising Surgeon of the Marine Hospital Service to prepare or cause to be prepared, from the reports and observations of the Marine Hospital surgeons and from other available sources, a brief and succinct history of the yellow fever epidemic of 1873 as it prevailed at the various ports of the United States, with especial reference to details of prevention and hygiene; and transmit the same to the Senate at the earliest day practicable.

This Report is very complete and is accompanied by an outline map of the epidemic.

The Report of 1875–76 contains a history with map of the disease at Key West in 1875, by Surgeon Murray; at Barrancas, for the same year, by Dr. J. S. Herron (at that time in charge of Marine Hospital patients); in New Orleans and Pascagoula for the same year, by Surgeon Vansant.

The Report of 1876–77 contains a history of the disease in Savannah and Brunswick, Ga., in 1876, by Assistant Surgeon (now Surgeon) Henry Smith; in Savannah for the same year by Assistant Surgeon George H. Stone; in Fernandina, Fla., by Surgeon Murray; and the Marine Hospital at Boston by Surgeon (now Surgeon-General) John B. Hamilton.

The Report of 1878–79 contains a history of the disease of 1878 at Gallipolis, O., on the steamer H. D. Porter and cities and towns at which this infected vessel stopped, by Surgeon W. H. Long; at St. Louis, by Surgeon Wyman; at Cairo, Ill., by Assistant Surgeons Waldo, O'Reilly, and Keyes. The Bulletin of the Public Health, published during this epidemic by the Marine Hospital Service, gives the progress of the disease at New Orleans and Memphis, as well as all other places in the United States, besides containing a record of the devastating plague in Southern Russia, with maps of infected districts; also record of Asiatic cholera in the Eastern hemisphere, and copy of regulations issued by this Government to prevent the introduction of contagious and infectious diseases.

The Reports of 1882 give a portion of the history of the epidemic at Brownsville and Point Isabel, Tex., and Pensacola, Fla., by Surgeon Murray and Acting Assistant Surgeon White, and we understand that the Report for 1883, now in the hands of the printer, will conclude the history of the epidemic of 1882 in Texas and Florida, and give a statement of the epidemic of 1883 up to the date of its appearance in the Naval Reservation near Pensacola and the means employed to prevent its spread during the current season.

Reports of Hospitals.

PRESBYTERIAN HOSPITAL, NEW YORK.

SERVICE OF DR. F. A. BURRALL.

(Reported by ALPHEUS FREEMAN, Jr., M.D., House Physician.)

CASES OF INSOLATION WITH HIGH TEMPERATURES.

THE following histories of three cases of insolation occurring at the Presbyterian Hospital are interesting for the high temperatures exhibited.

CASE I.—On June 13, 1883, an unknown man was brought to the hospital, having become prostrated by the heat while doing laboring work in the upper part of the city. He was admitted at 11 A.M., unconscious, with the radial pulse imperceptible, respirations twenty-eight to the minute and very shallow, and a rectal temperature of 113.5° F. There was marked pallor of the face, and the eyes were turned up, with the pupils equal, contracted, and not responsive to light. No further examination was made, but he was immediately placed on a Kibbee cot and wrapped in a sheet, while ice was applied to the head, mustard to præcordial region, and hot bottles to the feet. This cot is so constructed that the patient lies upon a support of netting, with a trough placed beneath it. After wetting the sheet with water at about 65° F., ice-water was poured over the surface of the body and a hypodermic of ♏ xxx. of equal parts of whiskey and ether was administered at intervals of five minutes.

At 11.30 A.M. a very thready pulse at the wrist could be felt, beating at the rate of 188 to the minute, and after this treatment had been continued for an hour longer, it was found that the temperature had fallen to 106°. He was then rubbed dry and wrapped in blankets. Hypodermics of whiskey, ♏ xxx., were given every ten minutes, and one ♏ xx. dose of tinct. digitalis was administered. Soon after this the pulse became stronger, the respirations deeper, the pallor disappeared, and the pupils dilated. The temperature continued to fall, and at 1 P.M. was 103.5°, with pulse 155 and respiration 28. At this time he had a loose fecal movement, and soon after vomited a thick yellowish material. Whiskey, ʒ i., was introduced by the rectum, and retained. The condition of the pupils frequently changed; sometimes they were unequal, or contracted, or widely dilated. At 1.30 P.M. the temperature was 99.5°. Soon after this slight convulsive movements began to appear in the upper and lower extremities, and the patient occasionally would utter loud inarticulate sounds. The convulsions increased in severity, and the pulse grew weaker, while the pupils dilated widely. Dry cups were applied along the spine, but in a short time he became so violent that restraint was necessary. The breathing becoming very shallow, inhalation of oxygen was resorted to for fifteen minutes, and appeared to deepen the respirations. The patient also swallowed whiskey, ʒ ij., but did not retain it. At 4 P.M., the temperature having risen to 105°, water was again poured over the body, but in ten minutes it rose to 106°, after which it began to fall, and in half an hour stood at 103°, when he was removed from the cot and wrapped in blankets. Violent general tonic and clonic spasms occurred every few seconds, and the radial pulse, rapid and feeble, finally became inappreciable. Whiskey, ʒ ij., was given by enema, and retained, and the inhalation of oxygen was again resorted to, and improved the breathing slightly. At 5 P.M. a very small, soft, rapid pulse could be felt. The pupils were dilated and distinctly oval in shape vertically, but did not respond to light. The superficial reflexes were absent. All this time the convulsions continued and followed each other more rapidly and with undiminished violence, while during the intervals between the clonic spasms the muscles remained in a state of rigidity. Finally, the pulse disappeared and the face became cyanosed. By a convulsive movement the body was thrown forward, immediately after which he fell back and died at 6 P.M.

Autopsy twenty-two hours after death.—The muscle of the heart was unusually dark, red, and firm. Both lungs were very dark in color, almost black. When cut open they were found to be intensely congested and slightly œdematous. Both kidneys were moderately congested. The cut section of the liver showed numerous light-colored anæmic spots, as if the blood had suddenly been sucked from the liver and abdominal viscera to fill the lungs. The meninges of the spinal cord and brain were slightly congested; the brain itself was moderately congested.

The primary cause of death was the heat; the secondary or immediate, congestion of the lungs, with heart-failure.

CASE II.—P. Mc——, aged twenty; single; Ireland; laborer; was admitted on June 7, 1883, at 5.30 P.M., unconscious, and having general convulsions and frequent attacks of vomiting. The pulse was 166 and feeble, respiration 36, and temperature 109° in the rectum. Both pupils were contracted, but otherwise normal. He was placed on the Kibbee cot, with an ice-cap applied to the head, and ♏ lx. of equal parts of whiskey and ether were administered hypodermically. Ice-water was applied to the surface of the body, but in half an hour the temperature had risen to 109.5°, after which it began to fall and in an hour had reached 106.3°, when the covulsions ceased. This treatment being continued for forty minutes longer, the temperature had fallen to 101° and the cold-water applications were discontinued. He still remained unconscious, and in about five minutes the convulsive movements began to reappear. Chloral hydrate, gr. x., and tinct. digitalis, ♏ xxx., were given hypodermically, but had no apparent effect upon the convulsions. An hour later the temperature had risen to 106.8°, and

the cold-water treatment was again resorted to. Whiskey, ♏ xxx. hypodermically, was given every twenty minutes, and in one hour the temperature fell to 101.2°. He continued to improve steadily after this, and consciousness gradually returned. The urine showed a trace of albumen, but was otherwise normal. During the next four days the temperature never rose above 101.5°, and on the fifth day he sat up. From this time he continued up and about, only complaining of occasional vertigo, which lasted for two weeks, at which time his general health was excellent and he had no complaint whatever.

Case III.—T. M——, aged fifty-six; married; Ireland; laborer; was admitted to the hospital on July 17, 1883, at 12.50 P.M., in an unconscious state. The pulse was 128, full and soft, respiration 28 and stertorous, and the rectal temperature 109°. Whiskey, ♏ lx., and tinct. digitalis, ♏ xxx., were administered, and by the use of ice-water the temperature was reduced in fifty minutes to 101°. Soon after, slight twitchings were noticed in the upper and lower extremities and he began to groan loudly with each respiration; vomiting of a greenish matter occurred twice, and the temperature slowly rose to 102.2°. Improvement followed after this, and in four and a half hours from the time of admission he became conscious. From this time no rise of temperature took place, but his intellect was considerably impaired. On the second day a diarrhœa set in. The tongue became brown and dry, and delirium came on at night. The next day he became so violent that restraint was necessary, but no rise of temperature occurred. The urine presented the same characters as in the previous case. He slowly improved after this, and by August 1st was in excellent condition, both mentally and physically.

These thermometrical observations were made by an accurate instrument. In all the cases of sunstroke treated here during this summer, the temperature has readily responded to the application of cold, but showed a tendency to rise again for a time. The convulsions have not easily yielded to treatment, and seemed to favor heart-failure by producing exhaustion. Medication by the mouth has appeared useless, owing to the intolerancy of the stomach.

With few exceptions the patients were natives of Ireland, who had only been a few weeks in this city.

Progress of Medical Science.

Adulterations of Lard.—The recent investigation before the Chicago Board of Trade as to the purity of certain specimens of lard has developed several facts which are of interest to the general public as well as to scientists. The present position of science, chemical and microscopical, on the subject of lard adulteration has been defined and demonstrated by an array of experts such as has rarely if ever been equalled in this country either as to number or quality. First, it has been demonstrated incontestably that chemistry is at present unable to distinguish the fat of the hog from that of the ox, and is therefore impotent to detect an adulteration of lard when that adulteration consists of beef tallow. Second, it has been demonstrated that with the microscope a competent observer can readily distinguish beef fat from hog fat, and can accordingly detect an adulteration of lard with tallow. This fact is, to the best of the writer's knowledge, entirely new to science. Third, it has been shown that in the attempt to detect cotton-seed oil when mixed with lard, the chemist and the microscopist exchange their former *rôles;* for chemistry has an infallible method for recognizing and detecting cotton-seed oil even when mixed with other fats, while the microscope cannot distinguish this substance from pure lard.

Several facts of interest to the public were incidentally developed in the course of the investigation. Thus it is acknowledged by manufacturers that while the article called "prime steam lard" is what it purports to be—pure hog fat—yet several other brands of lard are regularly adulterated; for example, the substance which is by a refinement of irony designated "refined lard" is confessedly a mixture of lard with other fats, animal or vegetable. The occasion which led to this memorable investigation was a charge that a certain quantity of lard which had been sold upon the Board of Trade as "prime steam lard"—that is, as pure hog fat—was adulterated with tallow and with cotton-seed oil. The purchaser of this lard—amounting to some five hundred thousand tierces—sought to recover damages before the directors of the Board of Trade.

The evidence in support of the complaint consisted of two parts: First, the testimony of certain discharged employes of the firm accused of the adulteration (Fowler Bros.). These men, who, as was shown during the trial, were paid for their evidence, swore to the intentional admixture of foreign substances with the lard during the process of manufacture. The second part of the evidence for the prosecution—the only portion of scientific interest—consisted in the testimony of four chemists, to the effect that they had detected (1) tallow and (2) cotton-seed oil in the lard manufactured and sold by Fowler Bros. Their test for detecting tallow in lard is the so-called stearine test, and is based upon the hypothesis that tallow (beef fat) contains a larger percentage of stearine than lard does. According to these chemists pure lard contains one to two per cent. of stearine, while tallow has a much larger percentage. The chemists for the defence, Professors Remsen, of the Johns Hopkins University, Baltimore; Doremus, Witthaus, and Habirshaw, of New York; Sharples, of Boston; Haines, Rose, Hayes, and Tilley, of Chicago, all agreed, as the result of their personal experience, that the stearine test was utterly unreliable in distinguishing tallow from lard. This unreliability is due to the fact that it is impossible to determine the average quantity of stearine in either lard or tallow, so as to detect a constant difference. Profs. Doremus, Sharples, and Haines, in examining different specimens of pure lard, obtained results in the quantity of stearine varying as much as eight hundred per cent. These gentlemen testify that they weighed out at the same time two samples of pure lard from the same can, placed them in two flasks of equal size, and treated them in exactly the same manner, and yet obtained from the one about eight times as much stearine as from the other. They further found that while pure lard yields on an average (by the process of the chemists for the prosecution) about *three and four-tenths* per cent. of stearine, yet a mixture containing ninety per cent. of that same lard with ten per cent. of tallow gives only *two and one-half* per cent. of stearine. Profs. Remsen and Witthaus demonstrated by an elaborate series of experiments that the addition of even forty per cent. of tallow to pure lard, instead of increasing the amount of stearine extracted from it by this process, actually diminished this amount very materially. Even in their own hands the processes used by the chemists for the prosecution yield results so discordant as to prove their absolute unreliability. Thus from the same sample of the suspected lard one of these chemists obtained three per cent. of stearine, another five per cent., and a third eighteen per cent.

The case stood, therefore, as follows: five chemists, only one of whom enjoyed even a local reputation, claimed the ability to detect tallow in lard by chemical tests, and asserted that they had by these tests found that the samples in dispute were adulterated with tallow. Nine other chemists, including five of national reputation, asserted the impossibility of detecting tallow adulterations by the methods used by the prosecution; and they accordingly maintained that the analyses based upon these methods were utterly unreliable, and that the results obtained did not, therefore, cast the least suspicion upon the purity of the lard in question. The directors of the Board of Trade, sitting as a jury, devised a plan for

satisfying themselves upon the disputed point. They prepared five samples of lard, pure and adulterated, and submitted a portion of each sample to each of five chemists for examination. These gentlemen were, first, the most prominent chemist on the side of the prosecution, Mr. Delafontaine, upon whose testimony indeed the charge of adulteration was chiefly based, and who had asserted that the suspected lard contained at least twenty or thirty per cent. of tallow; second, the private chemist employed by the defence in their packing house, Dr. Rose, who had denied the possibility of detecting tallow adulteration by chemical means. The three other gentlemen selected were outsiders who had not been engaged upon the trial, and who were without exception inexperienced in the examination of fats. It seems somewhat strange that the board employed these inexperienced gentlemen rather than three of the numerous experts who had been engaged for months upon the subject in dispute. The results might have been more satisfactory had the latter plan been pursued. Yet it was abundantly demonstrated that no one of these five gentlemen was able to do what the chemists for the prosecution had claimed for themselves. Every one of them either failed to detect adulterations where they actually existed or found them where they did not exist. The analysis of Mr. Delafontaine had, of course, especial interest, since he had by his evidence during the trial endeavored to impeach the commercial honor and to ruin the business of the defendants. By this analysis, however, he demonstrated most clearly the utter unreliability of his statements in evidence. The first two of the five specimens submitted to him were absolutely pure lard; yet in these he detected both tallow and cotton-seed oil. In fact, in only one of the five were his results even approximately correct. The results of the analyses made by the other gentlemen supported perfectly the position taken by the chemists for the defence, namely, that chemistry is impotent to detect the presence of tallow when mixed with lard.

The use of the microscope for the detection of the adulteration of lard is a point entirely new in science, upon which there is no literature to consult. The unanimous result obtained by all the microscopists engaged upon the work is that there is at present no means for detecting an adulteration of lard with cotton-seed oil by means of the microscope. This is a matter of minor importance, since chemistry has now, thanks to the skill and industry of Prof. S. B. Sharples, of Boston, a test whereby cotton-seed oil can be detected in the presence of lard even when it constitutes but five per cent. of the mixture. This test consists in the difference in the shades of color produced upon the addition of sulphuric acid to the fat. This color test is quite independent of impurities in the oil, since it gives perfectly characteristic results with the bleached oil or even with cotton-seed stearine. Yet a new and brilliant field was opened for and by the microscope in the detection of tallow in lard. This discovery is the more valuable since chemistry is at the present time—as has been demonstrated in this investigation—quite unable to detect such adulteration. The possibility of distinguishing tallow from lard rests upon the fact that crystals characteristic of these substances respectively can be obtained by dissolving the fats in certain liquids and permitting them to crystallize. This fact, first made public during this trial, was discovered some two years ago by Dr. P. B. Rose, of Chicago. Dr. Rose's method consisted in dissolving the tallow and the lard in turpentine, and permitting the solutions to stand until crystals were formed; these crystals were then examined under the microscope in turpentine. Several of the gentlemen who were engaged for the defence repeated Dr. Rose's experiments, with varying results. All but one of them adopted his method or some modification of it. Dr. W. T. Belfield devised a somewhat different plan, which he demonstrated to be superior to that employed by Dr. Rose; its superiority consisted mainly in the fact that the characteristic crystals of both lard and tallow were clearly brought out even in small adulterations. This method has been adopted by two of the gentlemen who had previously employed that of Dr. Rose.

The method as devised by Dr. Belfield is essentially as follows: ten grains of the fat are dissolved in two drachms of Squibb's ether in a test-tube, which is allowed to stand uncorked for twenty-four hours (this time is usually sufficient to permit crystals to form at the bottom and sides of the tube in warm weather). If extreme accuracy is required certain details must be observed which it is unnecessary to describe here.

Treated in this way it will be found that the crystals deposited from the solution of lard are long, thin rhomboidal plates with bevelled ends (Fig. 1); these vary ex-

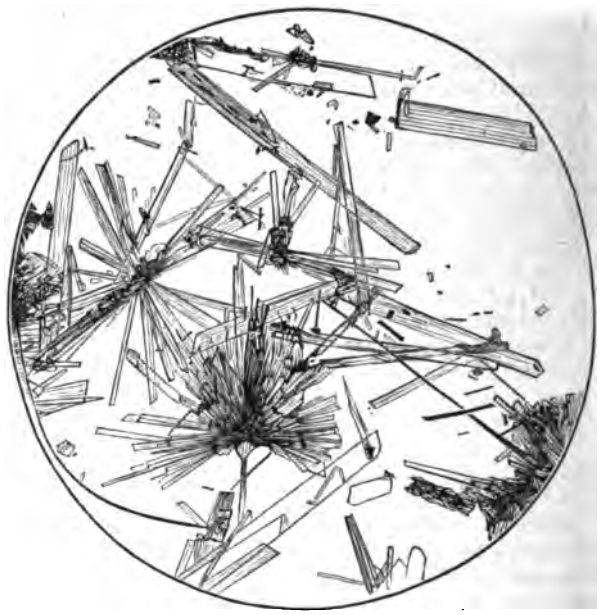


FIG. 1.

tremely in size according to the rapidity with which the evaporation has taken place. They are often arranged in rosettes, though not necessarily so.

The crystals from the solution of tallow, on the other hand, when treated in this way never show the rhomboidal plates characteristic of lard; these tallow crystals are found in masses resembling somewhat the letter "S" in shape, though the curves are not so pronounced (Fig. 2). These masses are found to consist of numerous small crystals, each of which is shaped somewhat like an italic "*F*." The size, shape, and arrangement of these small crystals vary under different circumstances; yet if the method introduced by Dr. Belfield be accurately followed, these crystals of tallow are always distinguishable from the rhomboidal plates of the lard. After this fact had been definitely ascertained and established, it remained to be seen whether these crystals, which are so characteristic of the lard and tallow respectively in the pure state, were to be found when the two are mixed as in adulterations. In order to decide this point, mixtures of the two fats in known proportions were examined. Each of the gentlemen engaged for the defence found that these crystals were present in the admixtures in which the tallow formed a considerable percentage. They differed somewhat in their experience as to the delicacy of this test. This difference in their ability to recognize minute adulterations seemed to depend upon the time and experience which they had gained as well as upon the method used; thus one of the gentlemen, Prof. Stuart, limited his ability to the detection of a twenty-five per cent. admixture of tallow. Dr. Belfield, on the other hand, demonstrated that by his method even a five per cent. adulteration could be detected in the following test: a series of

nine samples of lard was prepared by one of the chemists and submitted to Dr. Belfield for examination; these samples were lettered A, B, C, etc., and further than that the examiner had absolutely no knowledge as to their composition. As the result of careful microscopical examination, Dr. Belfield reported in writing that five of the nine samples contained tallow, while in the remaining four he was unable to detect any signs of this substance—that is, he could find none of the characteristic curved crys-

FIG. 2.

tals. A comparison of his report with the memorandum made by the gentleman who had prepared the samples showed that Dr. Belfield's results were accurate in every particular, and that he had detected the tallow in one of the samples where it formed only *five per cent.* of the weight, the remainder being pure lard. Three of the four samples in which no tallow was detected proved to be three of the samples whose purity was under dispute.

Micro-photographs were prepared by Dr. Belfield exhibiting to the board of directors the characteristic crystals of lard and tallow respectively, both in the pure state and when mixed in the form of adulterations. These have since been reproduced by the artotype process, and have been widely circulated in the official report of the Board of Trade as well as in the printed argument submitted to the board by the defendants.

Although the board of directors were perhaps not wholly impartial jurors, since most of them were pecuniarily interested in the result of the trial, and one member was even a subordinate in the business employ of the accuser, yet their verdict is interesting as well as valuable. They declare that the charges "have not been sustained," and are therefore dismissed. They further say: "The board of directors would embrace this occasion to express their gratification that as the result of this investigation this question of ascertaining the truth as to adulterations in lard by scientific examination, which has hitherto, to say the least, been one of extreme difficulty, seems now to give promise of a satisfactory solution. The board feels great encouragement to believe that even small adulterations with cotton-seed oil can be detected by some of the methods detailed in the evidence submitted in this case by scientific gentlemen, and that the microscope in the hands of an experienced operator can be successfully employed in detecting adulteration by beef product where it exists to the extent of ten, and probably even a much less percentage."

FLOATING KIDNEY.—Professor Senator's conclusions concerning floating kidney, based upon the records of thirty-two cases (*British Medical Journal*, September 29, 1883), agree in almost every particular with those to be found in Landau's *Wanderniere der Frauen*. Senator terms the affection "ectopia renis." He found one in every 139 sick women to be subject to floating kidney, independently of age or social station. Disappearance of the fat around the capsule of the kidney can hardly be a cause of this condition, for there is little or no such fat in children, among whom floating kidney is very rare, and men are as liable to emaciation as women, yet floating kidney is much less frequent among men than in women. The absence of fat, as Senator most pertinently observes, does not cause floating kidney, but facilitates diagnosis. The causes are more probably to be found in the condition of the generative organs and defects of attire. Repeated pregnancy causing pendulous abdomen is a very probable cause; and uterine displacements are considered by Landau to influence the position of the kidney; the same authority attributes displacement of the kidney to tumors and hydronephrosis, but Senator has never observed these pathological conditions in any of his cases. Tight-lacing is considered as a highly probable cause of floating kidney, as Mr. Clement Lucas observed in a recent paper on surgical diseases of the kidney, and would account for the greater frequency of displacement of the right kidney, which, in a tight-lacing woman, is subject to prolonged pressure by a large solid body, the liver. The greater length of the right renal artery favors displacement of the right kidney. To make diagnosis as certain as possible, the patient should first be placed on her back; the abdominal walls must then be thoroughly relaxed by passive elevation of the lower extremities. In examining the right lumbar region, the surgeon or physician should stand on the same side, and place the left hand on the loin posteriorly and the right on the abdomen; in examining the opposite side, these tactics must be reversed. Professor Senator appears to prefer this method to Landau's, for if the medical attendant stand on the opposite side of the patient, with the position of the hands reversed, Senator believes that the displaced organ is more likely to be pushed aside, and thus elude detection.

HOT-WATER ENEMATA IN DELIVERY.—Dr. D. S. Beckingsale writes, in the *British Medical Journal*, that "The value of hot-water enemata as a means of hastening delivery, apart from its use in the removal of fecal accumulation, in such cases of tedious labor in which either ergot or the forceps are admissible, has been hitherto unaccountably ignored in practice, as far as my experience extends. I formerly had warm-water enemata given with the usual object of removing fecal obstruction from the rectum. In most cases an increased rate of dilatation of the os followed. Latterly I have had enemata of hot (not merely warm) water administered, whether there were any appreciable collection of fæces or not, and always with the result of an accelerated rate in the progress of labor. The fact of the os dilating under the influence of the enema, whether there was an appreciable quantity of fæces or not in the rectum, proves that their presence does not prevent dilatation by causing spasm; at least, not in the majority of cases. It follows that the hot enema must act as a direct and powerful stimulant to the uterine muscle, and I feel convinced, I may add as a result of close observation, also to the voluntary muscles engaged in the act of parturition. Judging from the sense of relief which follows its administration, it has at the same time a relaxing and soothing effect on these same parts—analogous, in short, to the effect of hot water applied in the familiar form of a fomentation to an inflamed and painful swelling. I believe I am justified in adding that there is less atony of the uterus after delivery, when a hot enema has been given, and consequently less tendency to post-partum hemorrhage. On this account it has not the after-relapsing effect of chloroform on the uterus it otherwise commonly has. I submit that it would be as well to give so simple a means of treatment as hot-water enemata a trial in cases in which either ergot or the forceps would be used, as it possesses obvious advantages over both."

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, November 24, 1883.

THE DISCUSSION ON TYPHOID FEVER AT THE ACADEMY OF MEDICINE.

IT is a good thing occasionally to take up some well-worn theme and discuss it in the light of recent experiences. And this is especially true in the matter of typhoid fever, which, after having passed through the able hands of Louis, Murchison, and Liebermeister successively, seems hardly to offer the clinician of the present day much opportunity for adding anything new.

But we are apt to forget that there is always something in one's especial surroundings that modifies the type that we have agreed to accept as our standard under the dominating power of distinguished teachers, and it is therefore well sometimes to stop and consider certain other groups of symptoms than those that are classical. For otherwise the physician might justly inquire of himself, as in this case, whether or not it is the typhoid of Louis, or if the deviations from the acknowledged type are not so striking as to warrant us in devising a new classification for the continued fevers.

Probably, however, in the present instance, there is no modification necessary; indeed, one of our very best authorities affirms that the typhoid of to-day is certainly the typhoid of Louis. And yet we have come to look with uncommon interest lately upon the atypical cases that occasionally find their way into print, and which have been especially noted by Dr. Alonzo Clark, of this city, and Hoffmann, of Germany. But the author of the evening's paper touched the root of the whole discussion when he pointed out that atypical cases characterize every infectious disease, depending, in large measure, upon the date and locality of the epidemic. Indeed, we may go further and reaffirm that no known disease has a greater number of complications. But while the clinical train of symptoms vary so greatly, it is surprising what uniformity exists in the pathological lesions, which involve the follicular structures of the intestines in a manner that is peculiar to the affection, and is probably shared by only one other—the much-discussed and well-abused typho-malarial.

Perhaps it was unfortunate that the paper of the evening embraced so few pathological data, comparatively, for room was thereby left for objecting that the conclusions were mainly based upon clinical records, which naturally carry less weight. But turning to another point, it is not an agreeable matter for us to face the mortality figures of the tables of the hospital cases—a topic that was justly alluded to by the chairman. A percentage of deaths that from 1877 to 1882 has never fallen lower than 20.1 and has reached 30, may well give force to the inquiry whether the methods of treatment have been all they should have been. An explanation suggests itself in the fact that the field of study was too narrow, and that a more comprehensive arraignment of the city statistics might have improved the quality of the returns. Indeed, it was noted in the discussion that, as the history of the disease in children is different from that in adults, we may well be entitled to the returns from the hospitals or asylums where they are specially cared for. It will be in order, therefore, to hear from some of these institutions that were not enumerated in the printed tables. At any rate, this part of the subject is one of the most pressing interest, and cannot be allowed to pass by without a disagreeable contrast of its results with those of Liebermeister, whose personal experience, it will be remembered, covered over fifteen hundred cases. When this distinguished physician undertook his famous apyretic treatment he had been confronted with a mortality of about twenty-seven per cent., a figure that is not far from the average of the printed table; this percentage of mortality was reduced to sixteen per cent. under incomplete apyretic measures, and to eight per cent. under systematized apyrexy (quinine and application of cold).

On the other hand, we have no need to be alarmed at the somewhat increasing annual mortality from the disease in our midst. We should remember that, on the whole, the ratio of mortality has not kept pace with the increase of our population. And when, in 1881, we found an undue proportion of deaths, it may justly be assumed that we had other causes at work—causes that always will be associated with the large floating population of a metropolis. Foremost among them are the well-known facts that hospital accommodation in New York is excellent and often luxurious, while the cheapness and ease of transportation offer special inducements to the sick scattered in the country districts round about. Certainly, the greatest absolute mortality has been during the years 1863–66, the highest figure, 661, being reached in 1864.

It was a curious fact, noticeable in the discussion, that the speakers approached the etiology of the disease with a respectful reserve, and neither Liebermeister's drinking-water-sewer-gas-privy-vault hypothesis nor the later English milk-contamination theory offered attractions that made any one feel willing to risk breaking a lance in its favor.

ACONITINE POISONING.

THE valuable paper by Dr. Thomas Stevenson ("Guy's Hosp. Rep.," vol. xli., 1882) on "Aconite Poisoning," in the case of Reg. vs. G. H. Lamson, is of double interest both to the general and medico-legal practitioner, as accurately detailing the symptoms which we may expect to find in such cases, and the chemical methods by which aconitine can be best recognized.

The length of time after which the symptoms manifested themselves in this case, thirty minutes, may be partially accounted for by the fact that the poison was administered in a gelatine capsule. The first symptom

complained of was heart-burn. When, however, the alkaloid is taken in powder, the first symptoms are referable to the mouth and throat. A burning sensation in the mouth and throat is usually felt in about half an hour after the poison is taken, and becoming more intense every minute. Within three-quarters of an hour intense pains in the stomach come on, the skin feels drawn, violent convulsions, in which the patient rolls from side to side, rapidly ensue, and dysphagia generally, though not always, appears. In some cases vomiting may be a prominent symptom so early as half an hour after the ingestion of the poison. The character of the vomiting is peculiar. As described by Dr. Stevenson it is a kind of spasm, during which the sufferer turns convulsively on his abdomen, with intense contraction of the abdominal muscles, and the contents of the stomach are jerked out with a loud shout caused by the spasmodic contraction of the diaphragm. Peculiar also are the pupillary phenomena. The pupils are, as a rule, dilated, during which time consciousness is not lost, but in some cases they alternately dilate and contract, the patient becoming unconscious simultaneous with the contraction. The respirations are short, irregular, and superficial, and the skin, while feeling drawn, is covered with a cold, clammy perspiration. The violent muscular spasms may extend to the heart; the pulse fails and death seems imminent. This is succeeded by muscular relaxation which lasts for a few minutes, only to be followed by other convulsions, in which the facial muscles participate; the pulse fails, the patient becomes unconscious, and death usually ensues from asphyxia.

In the special case under consideration death occurred within four hours and five minutes after the ingestion of the capsule—containing probably two grains of Morson's aconitine. This preparation (Morson's) is prepared only from the cultivated *aconitum napellus* and is terribly potent, one-twentieth of a grain having caused death; so small a quantity as one two-thousandth of a grain causes the unmistakable physiological effect upon the tongue, and is invariably fatal to mice. Morson's crystalline aconitine is still more powerful, and the crystalline preparation of Petit, of Paris, is said to be even more powerful than Morson's.

With regard to the pathological changes caused by aconitine, its detection in the fluids and solids of the body and in the vomited matters, and the subsequent proof of its nature by physiological experiment, Dr. Stevenson has added much to our knowledge. The pupils dilated during life, with the exception of intermittent contractions occurring simultaneously with unconsciousness, are dilated post mortem. The membranes of the brain are slightly congested, while the lips are pale and the tongue so pale as to look bleached. There is no fluid in the ventricles of the brain or under the meninges. The heart is flaccid, appears stained with blood-pigment, and its cavities are empty. The other organs of the body, save the lungs, are usually intensely hyperæmic. The extent of the congestion of the intestinal tract seems to depend somewhat upon the duration of the case. Where death occurs quickly—within four or five hours—the congestion is more limited to the stomach and duodenum, with patches of congestion in other portions of the intestine. The stomach usually contains a variable amount of a dark or greenish fluid similar to that vomited during life. The bladder generally contains a few ounces of urine. As might be expected from the violent convulsions, the membranes of the cord are greatly congested.

It is unnecessary to detail the method by which the alkaloidal extracts were obtained from the viscera, vomited matters, and urine. Those who might have occasion to perform a similar analysis would do well to consult Dr. Stevenson's paper. The amount of alkaloidal extracts recovered was one-half grain. It was now necessary to determine their nature; they were tested by taste, with phospho-molybdic acid for alkaloids, and with iodic acid and starch for morphia. It should be remembered that the analysts were entirely in the dark as to the nature of the poisons. Indeed, they first suggested their nature after their experiments had been begun. Lastly, a portion of the extracts was injected into the cellular tissue of mice. Fortunately, the taste of aconite and its derivatives is so peculiar, and the effect on the tongue and mouth so striking, and, we may add, the physiological effect so marked should the experimenter taste too much, that it cannot be confounded with any other known substance.

The effect of the extracts upon the tongue was similar to that produced by aconitine. The effect on the tongue of the three aconite alkaloids, aconitine, pseudaconitine, and japaconitine, are precisely alike. They differ, however, in that aconitine has a physiological action upon the nerves of sensation, and is uniformly fatal, in very small doses, to animals. Dr. Stevenson describes the effects of a solution containing $\frac{1}{1000}$th grain to the drop as at first a scarcely perceptible bitterness similar to that of all alkaloids, and transient. In about three minutes after the sensation of bitterness has disappeared an intense burning, somewhat benumbing pain, is felt at the spot to which the drop was applied, and radiating in all directions. Immediately after the commencement of this, moderate salivation comes on, with a peculiar feeling of dryness and faucial constriction. The burning, numbing feeling is felt in the lips, especially on the inner surface of the lower lip. These sensations continue generally for hours, according to the quantity applied, and after passing away leave a painful sensation on that part of the tongue to which the alkaloid was applied. The feeling is very properly described as one of "soreness," as though a hot body had been applied to the part, just stopping short of raising a blister. Extreme caution is necessary in making this "taste experiment," and it should be regarded as dangerous to apply more than $\frac{1}{600}$th to $\frac{1}{100}$th of a grain. A larger quantity, by the very pronounced physiological effects on the heart, brings up serious thoughts of a last will and testament.

The phospho-molybdic acid test is, of course, only valuable for ascertaining the presence of an alkaloid. The physiological effect of aconitine ($\frac{1}{4000}$th to $\frac{1}{8000}$th grain of Morson's, hypodermatically) upon mice is almost as unmistakable as the "taste-test." Within six to ten minutes violent retching comes on. Sensation is rapidly abolished, the retching still continuing; partial or complete paralysis of the posterior extremity appears about ten to thirteen minutes after the injection. Frothing at the mouth appears about a minute afterward, and in from

one to three minutes thereafter the animal rolls or jerks itself over on one side in a violent convulsion, which ordinarily continues until death takes place, about fifteen or twenty minutes after the injection.

THE CHANCES OF THE YOUNG PRACTITIONER AS AFFECTED BY THE "ADVICE GRATIS" AND SMALL FEE SYSTEMS.

It is pretty generally conceded that the young practitioner has a long and hard struggle to get into a bread-and-butter practice. The time required is variously estimated at from three to five years, according to locality. During this period he must be ready for anything, night or day, and accept any fee, however small or disproportionate to the services rendered. If there are no dispensaries in his neighborhood, or college clinics, he has the ordinary show for a young, hard-working doctor.

Away from so-called educational centres he may get the usual reward by learning to labor and to wait. But how few such places are! The aspiring youngster generally looks toward a large city as a legitimate field for his ambition. Generally this is the worst place he can select. If he wishes to begin at the bottom, the college clinics, dispensaries, and free hospitals stand in his way. Such as should be his patrons know it, and are not willing to pay even small fees when they can get services for nothing. And such services! Real professors, men who, of course, must know more than the ordinary rank and file, are ever ready and willing to gather the sick ones from the highways and by-ways that they may not want for skilled advice and treatment. Clinical material is needed and it must be had. It is a business in itself, and has to be cultivated after the usual fashion. Fences are placarded showing where free advice may be obtained, where obstetric services can be secured by skilled men, where operations can be performed without money and without price, where every diseased organ can be properly cared for by distinguished specialists. Only the really poor are invited, but the more of the others who do come the more interesting and profitable is the clinic. Teachers seldom object to an unique case, rich or poor. It is the case, nothing more or less. Who can blame an honest, struggling mechanic with a rapidly growing family for stretching his conscience to get for nothing what would otherwise involve pecuniary outlay? The temptation to contribute to the advancement of science is, of course, too strong for him to resist. If "no questions are asked" he is under no obligations to answer. He gets first-class advice and treatment. What better can he desire? The young doctor around the corner is the only one who suffers. It is the survival of the fittest, after all. Which is which? The man who must have clinical material, or the man who must have bread-and-butter? But then the professor is not expected to be his brother's keeper, and the mechanic can lay up something more for a rainy day.

We confess to some pity for the young man who wishes to work and is left with nothing to do. He has some right to a decent show. It is the old story, of course, about the clinics taking away his patients. But it is getting truer every day. In old times, when there was fishing with hook and line, there was room for all who wished o take their chances. Now stock companies drive their stakes in the channel and stretch their drift-nets almost from shore to shore. Is it any wonder that those who are compelled to troll behind the net have, figuratively speaking, the usual luck of hopeful but foolish fishermen? How many there are of these! Men whose baits are washed away by long waiting, who seldom experience the delusive excitement of a promising nibble.

But we are told that the poor should not be allowed to suffer. They never would, even if there were no dispensaries or clinics. Each physician would gladly take his share, and could thus discriminatively dispense his charity. It is done quietly and effectively in all localities where dispensaries and free clinics do not abound. In fact, the deserving poor are liable to be better treated in such places than when under dispensary patronage. There is not a young practitioner in any large city who would not be willing to give his services gratuitously to half of such as called upon him and deserved the same. He could at least be satisfied that he was trying to do his best and to get what money he could. As it is, the small fee patients are thoroughly demoralized. Poverty is only a relative term. Some sneaking frauds, no matter how rich they are, can always make themselves believe they are too poor to pay any fee when not compelled to do so. There is no question of conscience with them when it comes to cheating a poor doctor. What account have our clinical teachers to render on the same score who do not seem to know or to care how many of the patients they treat for nothing should pay a fee to some young doctor! The question will by-and-bye be between the college and dispensary clinics and the rank and file of the profession. The latter will be forced to seek their own protection by new methods. The clinics are their enemies and they must be fought in some way or other. Practitioners, for mere self-protection, may be forced to set apart spare hours in their offices for the free treatment of the poor, and thus leave the dispensaries out in the cold. What is right for any body of men to do in advertising to give advice gratis to the poor is right for a single individual. This would certainly be one way out of the difficulty.

Again, young men are content with small fees; why not throw them in their way? The distinguished professor can afford to do this and narrow his work to a more profitable sphere of usefulness and emolument.

A MAN TO BE REMEMBERED.

There are not many who have the opportunity and ability to create an enduring monument of their passage through life. Dr. Jonathan Letterman, however, was one of these, and his memory has been faithfully and tastefully commemorated in a memoir recently written by Dr. Bennett A. Clements, U.S.A.

Dr. Letterman was born in 1824, and graduated from Jefferson Medical College in 1849. In the same year he entered the medical service of the army. He served in Florida during the Seminole War, and then was for several years on the frontier. At the breaking out of the war he accompanied troops from California to the East.

It was in June, 1862, that Dr. Letterman received his appointment as Medical Director of the Army of the

Potomac, in which position he accomplished a work which makes his name historic.

At that time the organization of the medical corps, especially as regards the work during active service, was very imperfect. The arrangements for removing the wounded at once from the field, and for furnishing immediate surgical and medical relief, were of the most unsatisfactory kind. Furthermore, there were no good precedents or models to follow in the medical organizations of European armies. At the time of Dr. Letterman's appointment, also, the army was exhausted by its conflicts and the malarious atmosphere of the Peninsula, and needed the utmost skill to secure its reorganization. Dr. Letterman was selected as the man best qualified to meet these emergencies, and was given large discretionary powers by Surgeon-General Hammond.

The result of his labors was the organization of an Ambulance Corps and of the Field Hospital System. By the practical application of these schemes the medical service of the army in the field was made incredibly more effective. In a short time its merits were recognized by the whole army, and it served as a model in all the other departments. It is not easy to compute the number of lives saved and the amount of suffering prevented by the system thus introduced. Dr. McNulty, referring to its working, writes:

"It is with extreme satisfaction that I can assure you that it enabled me to remove the wounded from the field, shelter, feed them, and dress their wounds within six hours after the battle ended, and to have every capital operation performed within twenty-four hours after the injury was received."

"Dr. Letterman's claims to the grateful remembrance of his profession and of his countrymen," writes Dr. Clements, "rest mainly upon the great services he rendered to his Government in the Army of the Potomac. To him is justly due the praise of originating a system of medical administration which alleviated the sufferings and preserved the lives of thousands of his countrymen, added to the vigor and effective fighting strength of the principal army of the Republic, and materially aided in perfecting and maintaining its discipline; and which has had no equal in the armies of modern times for simplicity and effectiveness."

Dr. Letterman left the army in 1864 and spent the remainder of his life in California, where he died in 1872. He was a man of simple and straightforward character, direct and plain in speech, genial and modest in disposition.

It is a pleasure and a duty to recall to our readers the record of a life so honorable, a work so noble and beneficent, as was that of the Medical Director of the Army of the Potomac.

THE ALLEGHENY COUNTY MEDICAL SOCIETY FROM AN INSIDE VIEW.

We are glad to have received from Dr. W. H. Daly, of Pittsburgh, Pa., a letter concerning the condition of the Allegheny County Medical Society, referred to editorially some weeks ago. Dr. Daly was recording secretary of the society for ten consecutive years, and later its president; he denies very emphatically the existence of any such state of affairs as was pictured at that time. His letter is too long to publish in full, but we take pleasure in giving the essential features of it. Dr. Daly explicitly denies the statement made by our correspondent that "one of the popular members" of the society had advertised for a year in the daily papers, and had lately announced that he gave special attention to diseases of the eye, ear, etc. He also denies that a member who had been abroad requested, upon his return, the press to announce the fact with suitable comments. He admits that a physician who had been abroad announced his resumption of practice by an advertisement "of two lines." This is thought to be perfectly proper, however, as the gentleman in question had been away for nearly two years, and it had been rumored that he would remain abroad or would not return to Pittsburgh. As regards the statement that some of the Pittsburgh physicians had called a certain private hospital the "Pittsburgh Abbatoir," Dr. Daly shows that the imputation is discreditable and unjust. In six months there were performed 19 operations with 2 deaths. The charge that certain physicians keep selected formulæ at the druggists is explained by saying that these formulæ are simply the same that have been used by many of the doctors in the public dispensary. They have been printed and widely distributed among doctors and druggists. Dr. Daly challenges proof that any member prescribes such things as "my mixture" or "my application." Dr. Daly does not believe that any physician attends families at ten dollars a year, and asks for proofs of such accusation. To the charge that there are in the County Society men without diplomas, and men with diplomas from eclectic medical colleges, it is said that the constitution of the society admits to membership any regular practitioner of at least fifteen years' standing, and of good moral and professional reputation. While there is a graduate of an eclectic college and a physician without a diploma in the society, they are both good and constitutional members. As regards the signing lunacy certificates with homœopaths, the immorality of this procedure is questioned. The existence of quacks in the society is denied, and it is also asserted that Dr. Jas. King did not point out any when he was alive, and was not, in fact, a very active member of the society. As regards the charge that many of the best practitioners are not members of the society, and that others contemplate resigning, Dr. Daly gives facts showing the prosperity of the society. The charge that a medical college is soon to be started is freely admitted, and we are promised an excellent one. The profession in Pittsburgh is said to be doing very well, most, if not all, of the doctors earning a comfortable living. In conclusion our correspondent says: "The Allegheny County Medical Society comprises a large, if not the largest, portion of the best medical talent in the city. In its ranks are men who are the peers of the best, purest, and most respected citizens in the land. On its rolls are borne the names of physicians who are the trusted medical advisers of men and their families whose intelligence could not be imposed upon by quacks of any profession. Its representatives have been honored associates in the highest and most learned medical bodies of the nation, and from its roll have been selected men who have creditably served in the councils and in the scientific deliberations of the

various foreign medical congresses. In the list of American delegates to the International Medical Congress which met in London last year, and whose scientific labors were a wonder of ability and comprehensiveness, the names of members of the Allegheny County Medical Society are there, side by side with others, alike respected and worthy of the esteem of their countrymen."

A UNIVERSAL MEDICAL REGISTER.

THE erection of the new École de Médecine in Paris, to which we have already referred, includes the erection of a library building. The future library is to be made to include as many as possible of the medical books and pamphlets that have been published. The total number of books which would have to be collected for a complete library is about 122,000, while the number of pamphlets is 250,000. It is evident that no such collection could be made, or indeed is needed.

Another project, more novel and less ambitious, though difficult enough, is to keep a register of all the legally authorized medical practitioners in the civilized world—or at least in America and Europe. The number is supposed to be about as follows: United States, 65,000; France, 26,000; Germany and Austria, 32,000; Great Britain and its Colonies, 35,000; Italy, 10,000; Spain, 5,000.

Such a register, if carefully kept, would certainly be of considerable value, especially to advertisers.

THE LIBERTY OF SPECIALISTS TO ANNOUNCE THEIR SPECIALTY.

THE *Louisville Medical News* calls attention to a fact which we believe has been forgotten by many. It is that the American Medical Association, which has been proudly designated as the guardian of the ethics of the profession, has given a specific consent to allow specialists to designate their specialty upon their professional cards.

In 1874 the Judicial Council, in accordance with a request made by the Association the previous year, made a report upon ethics in which the following quotation occurs:

"The Code of Ethics very properly makes no mention of specialties or specialists, but presents plainly the rules necessary for the maintenance of professional character as applicable to all. But we are asked how, then, can those who wish to pursue a special practice make known their position to their brethren and the public? We answer that the title of Doctor of Medicine covers the whole field of practice, and whoever is entitled to that appellation has the right to occupy the *whole* or any part of the field, as he pleases. The acceptance of this honorable title is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. *As all special practice is simply a self-imposed limitation of the duties implied in the general title of doctor, it should be indicated, not by special or qualifying titles, such as oculist, gynecologist, etc., nor by any positive setting forth of special qualifications, but by a simple, honest notice appended to the ordinary card of the general practitioner, saying, 'Practice limited to diseases of the eye and ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be. Such a simple notice of limitation, if truthfully made, would involve no other principle than the notice of the general practitioner that he limits his attention to professional business within certain hours of the day.* Neither could it be regarded as a claim to special or superior qualifications. To give the specialist any privileges beyond this would be to invest him with a special advantage inconsistent with the equality of rights and duties pertaining to the profession."

The report was adopted and its sentiments have been recently endorsed, we are informed, by the distinguished editor of the *Journal of the American Medical Association*.

The sentiments and views thus expressed certainly appear to be fair and sensible. But it will be conceded that the permission thus granted is one liable to very dangerous abuse. The question when a person can draw the line in the matter of the wording upon his cards, and to what extent he can distribute these cards, would certainly involve some very delicate distinctions. It is creditable to the wisdom and good ethical sense of the profession that so far the permission thus to designate a specialty has not been to any extent taken advantage of. We trust that physicians will continue to show that they are capable of taking loftier views of professional dignity than the Judicial Council of 1874.

THE DIAGNOSIS OF GASTRIC DISEASES.

A NUMBER of new methods have been devised of late for the more exact examination of pathological disturbances of the stomach. The use of substances which are rapidly taken into the blood and reappear in the saliva and other secretions, the washing out of the stomach and examination of the fluid thus obtained, the gastroscope, palpation, percussion, and surface thermometry all combine to make the examination of gastric diseases much more definite than it used to be. Quite recently M. Rommelaere has added to the above methods of research another one, viz.: the examination of the urine. His views, first expressed some months ago, have been confirmed by further experience, and he now announces (*Journal de Médecine de Bruxelles*) the following conclusions: A cancerous ulceration of the stomach is attended with diminution in the amount of urea excreted per diem and also of the urinary chlorides. Simple gastric ulcer is associated with normal azoturia (if that expression be allowed), or even hyper-azoturia, and the chlorides are of normal amount or in excess. Spreading gastric ulcer is accompanied by normal or hyper-azoturia, but with decrease in the chlorides of the urine.

This help, which the above formula, if correct, would give in cases where early diagnosis of cancerous disease is desired, will be very apparent.

KAIRIN AND ALBUMINURIA AFTER HEMORRHAGE FROM THE BOWELS IN TYPHOID FEVER.—We have received from Dr. T. A. McBride an article on these topics which would have been well placed had it appeared in the same number containing the discussion on typhoid fever, but it came too late for this week.

News of the Week.

THE MEDICAL FATHERS OF NEW YORK.—Bearing on the question of longevity of medical men who spend active lives in their profession, we are enabled to instance other striking examples. Our friend Dr. Alfred C. Post has very significantly said that a man's age is not counted by years; that some are as young at seventy as others are at forty, and we are happy to say that his present condition proves it. The same principle applies in many particulars to Drs. Alonzo Clark and James Anderson, each eighty years of age, and the active veteran Dr. Jared Linsly, aged seventy-nine. The latter gentleman has been in full practice in this city for over fifty years, and knows more about old New York than any practitioner living. When he commenced practice the greater part of the city was a wild, open country. Many of his present patients are great-grandchildren of his earlier patrons.

THE FIFTEENTH ANNIVERSARY OF THE PRESBYTERIAN HOSPITAL, New York, was held at the Collegiate Dutch Church, Forty-eighth Street and Fifth Avenue, on Sunday evening at eight o'clock, before a large audience. Addresses were made by Rev. John Hall, D.D., of this city; Rev. Dr. Arthur Mitchell, of Cleveland, O.; and Dr. George F. Shrady, one of the visiting surgeons of the hospital. Mr. George W. Lane, president of the Board of Managers, presided.

Dr. Hall referred to the loss which the hospital had sustained during the year in the death of ex-Governor Edwin D. Morgan, William E. Dodge, and Robert L. Stuart, all members of the Board of Managers and warm friends of the enterprise from its inception. He eulogized Mr. Stuart, saying that few men he had known "had paid as little regard to popularity." He referred to the gifts of an ambulance and an elevator which the hospital has received during the past year, and also to the kindly efforts of Christian women to make the wards attractive and the inmates comfortable. Criticisms of the name of the institution as indicative of narrowness were, he said, disposed of by the annual report, which showed that of every 100 patients 50 were Protestants of various denominations and the other 50 Roman Catholics.

Dr. Shrady, after alluding to the general increase of usefulness of the hospital, presented some of the more striking incidents occurring during a day's visit to the wards.

Dr. Mitchell, of Cleveland, O., concluded with an address on the magnitude of the work done at the hospital and its growth, and gave an account of the Presbyterian hospitals in Asia. A benediction by the Rev. Dr. Talbot Chambers closed the services.

The report for the last year shows that 1,223 patients have been admitted during the year, and, including those in the hospital at last report, 1,297 have been treated. The rapid increase of benevolent work is most clearly evidenced by the fact that one-half of all the patients treated since the hospital was opened have been cared for in the past three years. Forty-three per cent. of all admissions during the year have been brought by the ambulance in response to calls from the Twenty-third and Twenty-eighth police precincts. Nearly all were accident cases, and most were working-men, injured while engaged upon the many new buildings in the district east of Central Park. All these patients were in the wards, receiving the best care, within a very few minutes after the call had reached the hospital.

Messrs. McKay, Trowbridge, and Brewster have donated a new ambulance to the hospital, and Mr. Heber R. Bishop has presented an elegant passenger elevator.

The erection of new pavilions is contemplated, to meet the urgent demand for increased accommodation.

DR. S. S. CARTWRIGHT, OF ROXBURY, N. Y., has been elected member of the New York State Assembly for the county of Delaware. We congratulate the profession of the State on securing such a worthy representative.

THE BRAIN OF THE NOVELIST TOURGENIEF is said to have weighed 2,012 grammes, or about 63 ounces. This, if correct, ranks the brain among the half-dozen heaviest that have been reported.

THE FIRST CASE OF SMALL-POX IN THIS CITY since last June was discovered by the sanitary authorities November 17th, in a tenement-house on West Fifty-ninth Street, which is inhabited by ten families. The patient, who arrived from Ireland two weeks ago, was removed to the Riverside Hospital.

MARYLAND STATE SANITARY CONVENTION.—A sanitary convention will be held in Baltimore, Md., November 27th and 28th.

THE BIOLOGICAL LABORATORY of the Johns Hopkins University has been completed.

THE INDIANA STATE BOARD OF HEALTH has distributed circulars and will undertake the task of making a report upon the sanitary condition of all the school-houses in the State. The *Indiana Medical Journal* says: "If the Board succeeds in improving the deplorable hygienic conditions in or around almost every school-house in the State it will have covered up a multitude of sins in the past, and in a measure regained the confidence of the profession and citizens of the State."

EDWARD BURKE THE CHAMPION CORPSE HANDLER.—In THE RECORD for last week we published an item of news, entitled "The End of a Curious Career." Under this heading was given a brief sketch of a "well-known figure in connection with the Morgue, in this city." It was said that "he died last week;" that he "had probably handled more corpses than any man in the world;" and that "his pet and particular abhorrence was a newspaper reporter." The story has some interesting features. In the first place, Burke has not yet furnished "the *end* of a curious career." He still lives, and can be seen in Ward 19, Bellevue Hospital. Old Charon rowed his boat along close to the shore, and invited Burke to ride across the river, but being "a quiet man and having but little to say to strangers" he declined the invitation. He has not yet entered the crib, and hopes to live to meet "that newspaper reporter" who shuffled him off. It was also said that "Burke was not a man of tender susceptibilities." Admitting this to be true, we are prepared to understand that said reporter, under favorable circumstances, might be added to the "50,000" [yes, many more than that] corpses which Burke has handled. We are pleased to be able to chronicle that

the well-known figure of Burke has not permanently disappeared from the Morgue, and hope he may again be able to assist at "thousands of post-mortem examinations."

MEDICAL DEPARTMENT OF DARTMOUTH COLLEGE.—At the last commencement, November 13th, there were forty graduates. Addresses were made by President S. C. Bartlett and A. P. Richardson, M.D.

UNITED STATES MEDICAL COLLEGE AND ITS LEGAL STATUS.—In answer to a question from a correspondent regarding the legal status of the United States Medical College, we append the following from Dr. D. Webster, President of the Medical Society of the County of New York: "'The United States Medical College of New York' is not and never was a legally chartered medical college, and none of its graduates are legally qualified practitioners of medicine. The institution has taken its case up to the Court of Appeals, however, as a last resort, and until the case has been there finally disposed of I think we will do well to refrain from interfering with the 'doctors' who graduated from that college in good faith. The New York County Medical Society has as yet brought no action against any of them."

THE NUMERICAL STATUS OF THE CODE QUESTION.—We have received from "The Central Organization of the New York State Medical Association to Uphold the National Code of Ethics" a pamphlet showing the vote or non-vote of the members of the medical profession in this State on the Code of Ethics. The figures given are: National Code, 2,424; New Code, 943; no code, 210; unclassified, 31; uncommitted, 1,611; total, 5,219. In New York County, out of about 1,800 names 764 are placed among the National Code party. We recognize here, however, many names of those who voted for Dr. Vander Poel at the County Society. Despite all efforts, a majority for the National Code has not been secured. Many of those who have given their names would, we believe, prefer to be among the uncommitted. We ask, now, will a minority of the profession continue to try and force upon the majority the enactment of a disciplinary by-law which accomplished nothing but to lower the physician in public esteem?

SUIT AGAINST THE SECRETARY OF THE ILLINOIS STATE BOARD OF HEALTH.—A Dr. Frank B. Smith, of Detroit, Mich., has begun a suit for fifty thousand dollars in the United States District Court against Dr. John H. Rauch, Secretary of the Illinois Board of Health, whose name, he alleges, was signed to a circular revoking his (Dr. Smith's) license for unprofessional and dishonorable conduct. This conduct, the plaintiff adds, consisted in his advertising his presence when he was a delegate to a health convention at Peoria.

THE SATURDAY AND SUNDAY HOSPITAL COLLECTIONS.—At a meeting of the Saturday and Sunday Hospital Association, November 20th, a report of the Executive Committee was read. This showed that 293 churches and synagogues had promised to take a collection on next Hospital Sunday. The various hospitals represented in the Saturday and Sunday Association have submitted their annual statements as a basis to guide the action of the distributing committee in allotting the undesignated portion of the forthcoming collection. These statements possess a general interest, moreover, and when compared with the exhibit of the first published statement of 1881, give evidence of a vigorous growth in hospital work in this city. It is thus seen—1, that during the past three years $201,651.44 were expended on the enlargement of accommodations among the hospitals thus associated; 2, that there has been an increase in the income from the invested funds of $9,780.12; 3, that there has been an increase of income from paying patients aggregating $43,036.72; 4, that the increase of income from contributions toward current expenses other than derived from the Saturday and Sunday collection is $22,774.84; 5, that the total number of patients has increased from 8,688 to 10,023; 6, that the total number of free patients has increased from 6,698 to 7,188, these last having been maintained at a cost of $307,790.81. This exhibit is claimed to be a sufficient answer to the statement to which publicity has recently been given in some quarters (said to be based on London experiences), that the method of general collection fostered by the Saturday and Sunday movement is inimical to the real interests of hospitals, in that it has a tendency to divert from them special gifts and bequests, because of the impression falsely conveyed that the one general collection is ample for the maintenance of all the hospitals benefited by it. It must be admitted that the London hospitals have been in great financial straits of late years.

TROUBLE AMONG PHILADELPHIA MEDICAL STUDENTS.—The daily papers give accounts of much unhappiness between the students of Jefferson Medical College, Philadelphia. It appears that the senior students thought that they were crowded out by the juniors from the best seats at the clinical lectures. They therefore called a meeting, organized, and addressed a petition to the Faculty setting forth their grievances. The juniors then called a meeting also, and circulated a counter-petition. During this meeting some of the senior students came in, and after a free interchange of paper wads the gas was extinguished. A general mêlée in the dark followed, with the result of producing some interesting cases of minor surgery. Next morning, when the two classes assembled, the row began again, and there seems to have been something in the nature of a free bruising matinée.

We regret to learn of such incidents as the above, and venture to express the wonder that some of the more pacific sections of the National Code of Ethics were not read to these violators of order.

THE STATE BOARD OF HEALTH held a meeting at Albany on November 21st. Various reports showing the progress of sanitary work were made.

FIRST AID FOR THE INJURED.—The Society for Instruction in First Aid to the Injured held its annual meeting in its rooms, in East Fourteenth Street, November 21st, and the old board of officers was elected, with the Hon. John Jay as President and Dr. Henry B. Sands as Medical Director. Plans were discussed for further disseminating among all classes practical information on preliminary treatment of the injured, and for establishing branch societies in smaller towns.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 15, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE Statistical Secretary, DR. F. V. WHITE, announced the death of J. Marion Sims, M.D.

THE PRESIDENT spoke as follows: By the death of Dr. Marion Sims the Academy of Medicine, the profession of this city, and, I may well add, the profession of this country, has lost its most original and most brilliant genius in the department of surgical gynecology. This will be conceded by all. Had circumstances forced him to equal activity in other branches of surgery, his promptness and fertility in practical suggestion, his intuitive power of conception of new means to secure any desired result, his endowment of invention and wonderful mechanical adroitness, would undoubtedly have secured for him equal eminence in all of its departments. No one can be compared with him in his own sphere, in which he achieved such great distinction, except the late Sir James Y. Simpson. An intimate acquaintance with both for many years will perhaps justify me in saying that there were many points as to their intellectual and moral qualities which were strikingly characteristic of both. These resemblances were much more numerous than the points of contrast. In the future, the greatest fame of one will rest on his courage, and I may even say audacity, in successfully introducing anæsthetics to relieve the agonies of parturition; of the other, by his genius in devising new methods of physical exploration and new surgical procedures which effect cures of lesions which before could neither be correctly diagnosticated nor successfully treated.

In thus alluding to the greatest achievements of the two, I should also add that both were incessant, zealous workers who for many years were constantly making positive contributions to our science and our art, many of which would alone establish their claim to be regarded as great men in our profession, the former adding more to our scientific literature and the latter more to the advancement of our art. Neither of them were reluctant to have their good work appreciated.

To-morrow morning I doubt not every Fellow whose engagements will permit will be present at the funeral services of our late eminent associate.

The Chair, in accordance with our By-Laws, will designate Dr. Thomas Addis Emmet to read a memoir at the first meeting of the Academy in January.

DR. FRANCIS DELAFIELD then read a paper on

TYPHOID FEVER IN NEW YORK (see p. 531).

THE PRESIDENT regarded the paper as one of the most analytical contributions to our positive knowledge of this disease which had been made since the writings of Murchison. He also suggested the following points, which he thought worthy of discussion. First, with regard to the percentage of mortality. It should be remembered that the paper was based upon hospital statistics alone, and doubtless many of the patients had not been placed in a hospital until they had reached an advanced stage of the disease. For twelve years, in the fever hospital in London, Murchison states that the mortality was fifteen per cent. In private practice Dr. Barker thought that fifteen per cent. was a rather high rate of mortality.

Another point which struck him with some surprise was the small proportion of cases in which there were prodromic symptoms. Perhaps this also was due to the fact that the patients were hospital patients, and yet it might be the fact that prodromic symptoms are absent in a larger proportion of cases than we have been accustomed to suppose.

Another point, and one which had attracted his attention for several years, was that the temperature did not seem to be a measure of the severity or the mortality of the disease. In some of the most dangerous cases the temperature does not rise above 101° to 103° F., and in others in which the patients recover the temperature rises as high as 105° F., or even considerably higher, but they do not have other symptoms of a severity corresponding with the temperature. Again, the large proportion of cases in which diarrhœa occurred as a symptom in the first week of the disease was noticeable; much more frequently than he had observed it. He also observed that twenty-five per cent. of the deaths were apparently due to hemorrhage from the bowels, and Dr. Barker thought this would accord with the experience of almost all.

DR. ALFRED L. LOOMIS said he was interested to be present, first, because Dr. Delafield was to read the paper, and, second, because he wished to know how the author of the paper would define typhoid fever. A very carefully prepared analysis of the cases of this disease, as it has appeared in our hospitals during the last five years, had been given, embracing the symptoms which mark the development and the course, together with the morbid anatomy of ordinary continued fever; but there did not appear in the record a history of the characteristic symptoms of typhoid fever as we have been led to believe it exists in other countries. For example, if we take the description of the disease given by Liebermeister, it does not accord at all, in its main features, with the record given by Dr. Delafield, and the question comes back to us, What is typhoid fever? Is it a specific form of fever, due to a specific cause, characterized by symptoms always present, and attended by pathological lesions always the same? Liebermeister says it is a specific fever; that it has a specific and characteristic history; that it is due to a specific poison; and that it requires a specific treatment. The characteristic symptoms described in the writings of European observers are, first, a typical range of temperature, a gradual rise during the first week, an even line during the second week, a remittent range during the third week, and an intermittent temperature during the fourth week of the disease. Such a range of temperature did not appear in the cases reported by Dr. Delafield, nor had it been present in any of the cases of typhoid fever which he [Dr. L.] had seen in New York, if it may be called typhoid fever.

The second characteristic symptom is the eruption, appearing between the sixth and tenth day of the fever, each spot remaining visible for three days and then disappearing, one crop to be followed by another until the end of the eruptive period, which may continue for two weeks, or only a single crop of spots may appear. According to the record given by Dr. Delafield, the eruption was present in scarcely one-half of the cases. According to his own observations in hospital and private practice, the eruption has been the exception, and when present it appeared late and was not the characteristic rose-colored eruption lasting three days and then disappearing to be replaced by another crop. It resembled the characteristic eruption in that the spots disappeared upon pressure, but each spot remained an indefinite period varying from three to six days.

The third characteristic symptom is diarrhœa, the pea-soup discharges which appear during some period of the fever. The diarrhœa which had been spoken of had been mentioned as "characteristic discharges," but according to the definition heretofore given they were not characteristic, but simply such diarrhœa as occurs in most cases of fever.

Dr. Delafield had avoided one difficult point by saying the etiology of the disease is obscure, for the reason that investigation was exceedingly difficult, perhaps impossible, in very many cases. That brought us back again to the question, Is the fever which is prevailing in New York a disease of spontaneous origin, or does it depend

upon a poison which must be developed in a living body, must be discharged from that body, and must undergo certain changes in decomposing excrement before it is infectious? In other words, can true typhoid fever occur without a typhoid germ? Of course this is one of the most difficult parts of the history of the disease to investigate, and there is a great difference of opinion with reference to it. That cases of typhoid fever had developed in some of our hospitals there could be no question, and some of the wards in our hospitals are in a condition favorable to the development of typhoid fever if it is of spontaneous origin.

Dr. Loomis then gave a brief analysis of the cases which he had seen in his wards at Bellevue Hospital since the last week in September—Dr. Weldon, House Physician. The number of patients was 17; of these 13 recovered and 4 died. Of those who died the average length of time in the hospital was three days; of those who recovered thirty days, the longest fifty days and the shortest fifteen days. The highest elevation of temperature was 105⅘° F.; the average elevation was 101¼° F. Eruption was present in 4 cases, diarrhœa in 4 cases, and constipation throughout the disease in 13 cases. Hemorrhage from the bowels occurred in 2 cases, and both patients recovered. Autopsies were made in 2 cases, and there were found ulcers in the small and also in the large intestine, and in one case the ulceration in the large intestine was much more extensive that in the small. Dysentery occurred in *one* case during the period of convalescence.

These cases led him to believe that he was to regard the fever now prevailing in New York either as a continued fever with typhoid symptoms, or else abandon the idea that there is anything characteristic of typhoid fever; that it is simply a continued fever, which may or not be spontaneous in origin, possibly may be contracted under certain circumstances, a fever without regular history, and that we have not in New York a specific typhoid fever with characteristic cause and history, and which is never to be produced except by contingent contagion. We must either take that position or conclude that the majority of cases reported by Dr. Delafield were not cases of true typhoid fever. That is, we are not having true typhoid fever in New York, unless it be in a few cases accidentally brought to us from without the city and from where, perhaps, typhoid fever may be endemic or indigenous. Certainly the disease, as it now presents itself, does not correspond with Liebermeister's description, nor does it correspond to the history of the old New England typhoid fever.

THE PRESIDENT asked Dr. Loomis whether or not it had been his practice to endeavor to overcome constipation when present.

DR. LOOMIS replied that he allowed the constipation to continue; but what he meant by constipation here was absence of diarrhœa, the patients having occasional evacuations from the bowels.

DR. F. P. KINNICUTT said: Sir William Jenner has suggested that a potent and not uncommon cause of constipation in typhoid fever is to be found in a *deep* ulceration of one or more of Peyer's patches. Large superficial ulcerations favor a catarrhal inflammation of the intestinal mucous membrane and consequently diarrhœa; a single *deep* ulcer can produce a partial or complete paralysis of the bowel and hence give rise to constipation. Other causes of constipation are a torpidity of the large intestine with rapid absorption of its fluid contents, or diminished secretion from the mucous membrane of the bowel. With the view of ascertaining the relative frequency of constipation, its association with a mild or severe type of the disease, and, if possible, its causes, he had carefully studied the histories of all the cases of typhoid fever treated in St. Luke's Hospital during the years 1882 and 1883. The cases admitted during the summer and autumn of the former year were almost without exception of a very severe type, as is indicated by the death-rate. Twenty-six cases were treated, with 17 recoveries and 9 deaths. There was constipation throughout the stay of the patients in hospital in 13 cases, constipation for a week previous to death in 2 cases. In 4 of the 9 cases of death there was diarrhœa throughout the attack, in 2 constipation, in 1 alternating diarrhœa and constipation. In the remaining 4 cases which recovered there was diarrhœa throughout.

There were autopsies in two cases in which there was diarrhœa, in two cases in which there was constipation. In the former, in one case there was perforation of the small intestine; in the second Peyer's patches were elevated but not ulcerated; the solitary follicles of the lower portion of the ileum showed very superficial ulceration. In this case the diarrhœa was *very profuse*. In one case of constipation there were several perforations in the lower portion of the ileum; in the second, numerour ulcers and one large, almost gangrenous, Peyer's patch.

During the corresponding months of 1883, 18 cases of typhoid fever were treated, with 14 recoveries and 4 deaths. There was constipation in 7 cases, no diarrhœa in 2 cases, diarrhœa in 9 cases. In 2 of the fatal cases there was constipation, in 2 diarrhœa. In the only autopsy, which was in a case in which constipation was well marked, there were several perforations in the lower portion of the ileum. So far as the above observations go, they would indicate that constipation in typhoid fever is always a positive evil; and he believed often of dangerous import to the patient. This fact has a practical bearing in our treatment. In his own judgment, laxatives, however mild, are contraindicated after the first few days of the disease. Small enemata are far safer, and will answer every purpose. Small enemata, frequently repeated if necessary, are safer than larger ones given at longer intervals.

He was convinced that *true* relapses are wholly independent of any error of diet or other imprudence. He was disposed to believe that in these cases we see a form of *relapsing* typhoid. May we not believe, as Da Costa has suggested, that a portion of the poison remains latent, to reappear later and produce its legitimate effects, as is observed in cases of malarial fever? The indications for the use of alcohol are often misleading. In certain cases its use diminishes the frequency and increases the force of the heart's action, lowers the temperature, quiets the restlessness, the tremor, and delirium, and produces sleep. In other apparently equally favorable cases for its employment, all the symptoms become distinctly worse during its use. Personally, he was disposed to withhold alcohol until the third week, unless especially indicated.

His belief is that a large proportion of cases of typhoid fever are most advantageously treated by simple rest in bed, quietude, abundance of fresh air, and a carefully regulated fluid diet. Medicinal agents, as a rule, are needed only for combating special symptoms.

DR. E. G. JANEWAY said it had been supposed and so stated that typhoid fever is more prevalent in New York than it was formerly. He believed, however, that such a conclusion was incorrect, because mortuary statistics obtained at the Board of Health, and extending over a number of years, showed that according to the population the mortality from typhoid fever had markedly diminished. In 1848 there were 223 deaths from typhoid fever; in 1855, 139, and with a population less than one-half of what it is now; in 1870, 422; in 1872, 264; in 1874, 275; in 1875, 347; in 1880, 241. Besides, many cases of typhus were mistaken for typhoid fever during some of these years. He therefore thought that the real mortality from typhoid fever was not increasing in New York, when the increase of population was considered.

Another point which had been made was that the typhoid fever seen here at the present time is not the disease as it exists abroad. Yet the lesions, as seen by observers who have witnessed autopsies in both coun-

tries, are identical. It seemed to him, therefore, that if the lesions were identical we must look for the cause of the discrepancy, if there be any, in some other direction. The treatment, to some extent, furnishes one cause of the apparent discrepancy between the descriptions given by foreign writers and the histories of cases seen in our public institutions in New York. The influence of the quinine which patients almost invariably either take of their own accord or have prescribed for them early in the disease, must be taken into consideration in studying the subsequent progress of the affection. More than that, both Liebermeister and Murchison admit that there are atypical as well as typical cases. Dr. Janeway had seen typhoid fever in institutions in New York where a large number of patients were attacked at about the same time, and he had noticed, and the same thing has been observed in London, that the course of typhoid fever varies according as it occurs in children or in adults. At the Deaf and Dumb Asylum four outbreaks had occurred, the number of cases varying from fifty to seventy. At the Catholic Half-Orphan Asylum seventy of the inmates were attacked with typhoid fever within *one* month. In these two places the symptoms differed materially, and yet at autopsies made at both places the lesions were those of true typhoid fever. In the Deaf and Dumb Asylum the symptoms were those most commonly present in typhoid fever, such as nose-bleed, diarrhœa, etc.; while in the Catholic Asylum out of seventy cases diarrhœa occurred in only eight; only four patients had the eruption, and it appeared early in the disease.

The outbreaks in both of these institutions were of short duration. Dr. Janeway wished to direct special attention to this fact, namely, that typhoid fever is not necessarily a disease of three, five, or six weeks' duration, but a disease due to a poison which may produce symptoms lasting from three days to six or more weeks. In each instance, whether of short or long duration, the existence of the disease had been proved by autopsies. During the present autumn he did not recall a single case, occurring in an adult, in which the eruption was not present, and he thought that if the abdomen, the chest, and the back were closely inspected the eruption would in most cases be found within the first ten days of the disease. He had seen a number of cases in which the disease was contracted in the country, but had not seen that the lesions differed essentially from those found in cases having their origin in the city. It seemed to him that the typhoid fever in New York was like that which occurred in other localities and other countries.

It is difficult and sometimes impossible to determine the etiology of the disease in a certain case or group of cases. Dr. Janeway cited a case, that of a pedlar, who for a week had a diarrhœa, during which time he was at work, and when he wished to have a movement from the bowels used the privy vault of the nearest tenement-house. The case simply illustrated the possibilities concerning the propagation of the disease.

With regard to transmission by milk, the work in that direction in New York had been extremely unsatisfactory. Defective sewerage has also been found in localities where typhoid fever developed, but it is difficult to prove that the disease was caused by such imperfection, although it might give rise to a very strong suspicion.

Dr. T. A. McBride limited his remarks to cases seen at the Out-patient Department of New York Hospital, and to certain points in the treatment of typhoid fever. When a patient presents himself at the Out-patient Department with a diarrhœa he always takes his temperature, and almost invariably finds it elevated. He also has him stripped and finds an enlarged spleen, often some enlargement of the liver, and nearly always spots of the eruption of typhoid fever. Some of these patients are sent to the hospital and remain there for a long time, but many of them are not sick longer than from seven to ten or, at most, fourteen days. He had regarded such as mild cases of typhoid fever. They seemed to be very common, especially among people who go to dispensaries.

Recently he had had a patient who had a number of hemorrhages from the bowels, and he would ask Dr. Delafield how soon albumen appears in the urine and how long it continues. According to his observation in such cases, Dr. McBride believed that when excessive hemorrhage occurred from the intestines albumen almost invariably existed in the urine, unassociated with tube-casts or other elements of the kidney. What he wished to direct especial attention to was a point in the treatment of typhoid fever. It was with reference to the use of *kairin*, a remedy which he first employed in May last. During this autumn he had had several opportunities to use it. In one case the patient was unable to take quinine, whether in capsule, compounded with agents to prevent head symptoms, or otherwise, and with very satisfactory results. In this particular case fifty or sixty grains of kairin were administered in twenty-four hours.

The rule he had adopted, however, concerning its use was the following: When the temperature has reached 103° or 104° F., give *seven* grains of kairin every hour until the temperature falls to 101° F. If the temperature is 102° F., give only three and a half grains every hour until the temperature falls to 101° F. In every case the seven grains had reduced the temperature from three-fourths to one degree, and it had been seldom necessary to use it more than two hours in succession. Almost invariably the remedy produces profuse perspiration. Kairin simply reduces temperature, but it does not remain so and will rise again in the latter part of the day in a case of typhoid fever as soon as the use of the drug is discontinued. Therefore having lowered the temperature to 101° F., have the record made every hour, and on the slightest elevation above that point administer three and a half grains every two hours. He limited the reduction to 101° F., because if carried beyond that degree the patient is very liable to have a chill. When the rule given had been observed he had not seen a case in which a chill occurred, nor had he observed any depressing effect produced on the heart. The mode of administration had been by either capsule or pill. The urine assumes a greenish color while the patient is taking kairin, and contains a small quantity of albumen but none of the elements of the kidney.

Dr. Janeway remarked that kairin had been recommended in much larger doses than those mentioned by Dr. McBride.

Dr. McBride said he had employed fifteen-grain doses, but the temperature was brought down too quickly, and fearing that a chill might be produced he had used it in smaller doses and with equally satisfactory results.

Dr. Kinnicutt said that in some cases recently observed he had found it necessary to continue the drug from seven to ten hours to keep the temperature down.

Dr. McBride remarked that he had not seen any ill results follow the use of kairin for several days in succession.

Dr. H. Pinkney recalled a paper written by a physician in Milan twenty-three years ago, who made a number of experiments by introducing poison into animals, and succeeded in producing all the results of typhoid fever; and by using the sulphite of soda, either mixing it with the matter introduced or giving it internally, he was able to counteract the effects of the poison. For fifteen years he had used sulphurous acid successfully, apparently so at least, in typhoid fever.

Dr. J. H. Fruitnight had during six months met with thirty cases of typhoid fever. In twelve the disease pursued a very regular course, and two of these were especially interesting. One occurred in a woman advanced three months in pregnancy, and terminated fatally. The other in a woman who had just been confined, but the patient recovered. Among the twelve there were three in which relapses occurred, but all the patients recovered. Four patients had hemorrhage from

the bowels. Two cases terminated fatally; one on the fifth day with active delirium and a temperature at 105° F., and the other in the third week from exhaustion.

Dr. A. C. Post asked if in the cases attended with constipation or absence of diarrhœa there was pain, tenderness, or gurgling in the right iliac fossa.

The President remarked, concerning the use of laxatives in cases with constipation, that it had been his custom never to disturb the bowels by any medicinal treatment unless the patients complained of discomfort, and in such cases he had given a single dose of *five* grains of calomel with fifteen or twenty grains of carbonate of soda, which produces free evacuation without pain, and he had always felt that it was of great benefit.

Dr. Delafield, in closing the discussion, said that Dr. Loomis had spoken somewhat forcibly of the atypical character of the typhoid fever in New York, so atypical that he feels disposed to deny it even the name of typhoid fever. The fact that a disease does not always present its regular symptoms is something which is well known. And the fact that this disease does present itself in a somewhat atypical form was one reason why he thought it worth while to bring together the symptoms of a certain number of cases.

After all, this behavior of typhoid fever is the same as the behavior of many other infectious diseases, and as they occur in different places and at different times they present themselves with different degrees of development, both with regard to lesions and symptoms. Typhoid fever, as it has existed in New York during the last few years, has not been strongly developed as regards the morbid anatomy, but when the lesions are compared with those developed in other epidemics it is easy to see that they are the same in kind, although they may differ very much in degree. The same is true of the symptoms, although they have not been nearly as pronounced as they have been in some other epidemics. But if this is true of typhoid fever, it is equally true of many other infectious diseases, and Liebermeister, the author to whom Dr. Loomis had referred, was a writer who had misled a great many people. The article written by him and published in Ziemssen's "Cyclopedia" Dr. Delafield translated, and at the time became convinced that it was evidently made up of descriptions more definite and more decided than any descriptions can be possibly which are taken from nature. The author has evidently suppressed the truth to some extent in his desire to be positive, decisive, and clear.

Dr. Kinnicutt had spoken of the existence of constipation. Constipation unquestionably does exist in a fair proportion of cases, and by the word Dr. Delafield meant not only the absence of diarrhœa but real constipation. The condition apparently does not have anything to do with either the size or the number of the ulcers in the small intestines. This also is analogous to what is found in phthisis, where very often tubercular ulcers are developed in the small intestines, sometimes accompanied by diarrhœa, sometimes not, and the size and number of these tubercular ulcers do not have any direct relation to the amount of diarrhœa the patient has. In fact, he thought it was doubtful whether lesions of the small intestines produce diarrhœa; whether we do not have to look for other causes than these lesions.

It seemed to him that constipation is a real evil, and during the first week he saw no reason why a moderate laxative could not be given with safety and benefit, and he regarded it better to give a mild laxative than allow the colon to become filled with fecal matter. Later in the disease enemata are preferable.

Dr. Delafield agreed with Dr. Kinnicutt in the view that relapses are due to the disease itself rather than to any accidental circumstances.

With reference to the fact to which Dr. Janeway had called attention, namely, that when in any large institution a number of persons are attacked there will be some of whom it cannot be said that they have typhoid fever at all, this is a fact which cannot be questioned. It has been observed a great many times in other infectious diseases, as well as in typhoid fever, that the poison of a disease, whatever it may be, is capable of producing the characteristic disease, and also other disorders more or less like the real disease.

As regards the eruption, Dr. Janeway's experience seemed to be like his own—namely, that it is more constant in patients this fall than it has been before, and especially within the last six weeks.

With regard to the coincidence of albumen in the urine and hemorrhage mentioned by Dr. McBride, he had had no experience. Changes in the kidney are the rule in typhoid fever, and albumen in small quantity, as the result of these changes, exist in the urine in some cases, but not all. The kidney lesion can exist without albumen being present in the urine. The quantity of albumen in all the cases which he had seen had been small, ranging from a trace to five or ten per cent.

In some cases casts were found, in many there were none, and yet the lesion had been fresh parenchymatous nephritis.

In answer to Dr. Post's question, Dr. Delafield said he thought there was gurgling and tenderness over the caput coli in cases of constipation. Although he had no statistics on that point he could at once recall several cases in which the two conditions were associated.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 24, 1883.

George F. Shrady, M.D., President, in the Chair.

Dr. Charles Heitzman presented a specimen of

MELANOTIC MYELOMA OF THE CHOROID,

for which he was indebted to Dr. H. O. Farnham. It came from a Boston gentleman, sixty years of age, whose left eyeball was enucleated on account of a tumor of the choroid, diagnosticated by the ophthalmoscope. A few months after the operation the liver began to swell, obstinate coughing set in, and the patient died with symptoms of exhaustion. At the post-mortem melanotic tumors were found in the lungs, the liver, and the spleen.

On microscopic examination the primary tumor proved to be a melanotic myeloma of the choroid, the size of a sugar-pea, having at its periphery destroyed the retina, and invading the vitreous body. It was a combination of so-called "large round and spindle-celled sarcoma," all elements being crowded with dark red-brown pigment granules.

The point of interest lay at the peripheral portion of the tumor, which was ensheathed, toward the vitreous body, by a delicate, though distinctly marked capsule of fibrous connective tissue. The zone of the vitreous body nearest to the capsule was crowded with yellowish, globular, highly refracting corpuscles, greatly varying in size, but nowhere reaching the diameter of red blood-corpuscles. These corpuscles proved to be juvenile forms of living matter, which the speaker, in 1872, and Hayem, of Paris, several years later, termed "hæmato-blasts." All stages of development toward pigmented large elements of myeloma were traceable, the same as the formation of clusters of pigment from the hæmato-blasts. From the fact that such gradual changes of forms were seen in the vitreous body, from the small homogeneous globule, not endowed with properties of amœboid change or locomotion, up to the fully developed reticular and pigmented myeloma element, the conclusion must be drawn that these elements have originated in situ, in the vitreous body itself, from the living matter therein concealed. This is a strong proof of the assertion that the vitreous body is not a mere mass of mucus, but a regular living tissue, of the myxomatous variety of the connective tissue.

DR. A. JACOBI asked, Is it a tumor by itself?

DR. HEITZMAN said that it was independent so far as migration of cells were concerned, such spread being prevented by the capsule, which was unaffected.

DR. JACOBI asked, Is there lymph connection between the choroid and the interior of the eye in the direction of the vitreous body? If so, it is not necessary that there should be an independent sarcoma. For it was easy to imagine that sarcomatous cells might pass through lymph-ducts, which are apt to be open, and that might explain the apparent independence of the growth, while in reality it belonged to an original body.

DR. HEITZMAN said that but little was known as to the lymphatics of a sarcomatous growth, and to be sure the lymph-passages in this specimen, as well as toward the vitreous body, were scanty, the same as were the blood-vessels. But that was not the main point in his argument, as within the vitreous body itself could be seen bodies which illustrated all the different stages in the transition from a simple globule to the red blood-globule.

DR. HOWE thought there were small cells in the fibrous tissue.

DR. HEITZMAN regarded them as upon the fibrous tissue, having been drawn there by the razor when the section was made. Besides, it is known that red blood-globules are solid and never migrate. The capacity for motion manifests itself with the development of the reticulum of living matter.

EXTIRPATION OF THE KIDNEY.

DR. W. GILL WYLIE presented a kidney removed by abdominal section in August last. The patient was sent to him by Dr. Winters, of Phœnicia, and gave the following history: She was thirty-four years of age, the mother of four children, and had had one miscarriage. So far as she knew, all the members of the family had been regarded as healthy. At the age of fourteen she had what was said to be pneumonia, but further than that there was no evidence of pulmonary disease. During the last eighteen months she had been treated for supposed uterine disease. There was no evidence, however, from either physical examination or clinical history, that she was then suffering from either ovarian or uterine disease or disease of the Fallopian tubes. The chief symptom was pain in the right side, and sometimes painful menstruation. The pain during the last eighteen months had been very severe at times, especially after walking or other exercise, and finally became spasmodic and so intense that morphine at first, and later chloroform, were required to relieve the suffering, which was confined to the right side. The patient was examined while lying upon her back, and nothing could be made out by palpation except that the abdominal walls were lax, but as she sat up and twisted her body he felt a tumor just below the liver, and it seemed to be the kidney with its long axis at right angles with the long axis of the body. Dr. Wylie diagnosticated movable kidney, believed that the probabilities were in favor of its becoming strangulated, and recommended that it be removed. For a long time there had been steadily pus and albumen in the urine, and Dr. Winters had reached the conclusion, several months before Dr. Wylie saw the patient, that it was a case of loose kidney. About one week subsequently Dr. Wylie operated for its removal by making an incision through the abdominal walls, just to the right of the umbilicus, sufficiently large to admit the ends of the fingers, with which he was able to determine that the ovaries and uterus were normal, the intestines, the liver, and the gall-bladder also were apparently normal, and the left kidney was in its normal position.

The right kidney was not readily found, but that was accounted for by the position of the incision, for when the patient was placed in the upright position the organ twisted upon its attachments, so that its long axis was at right angles with the long axis of the body and it was at once detected. By having the edges of the wound held apart by tractors, Dr. Wylie was able to get one finger above and another below in such a manner as to push the kidney forward without much trouble, and then toward the right side. An incision two or three inches long was then made in the peritoneum, the upper end of the kidney was pushed through, and the entire organ followed without difficulty. The ureter was tied, leaving behind a portion about two inches long; the arteries were ligated and then the two were tied together and the whole mass cut off. The stump was dropped back. The abdominal wound was closed with sutures and dressed, and the patient was left in the care of Dr. Winters. No bad symptoms occurred for nine days, and during that time the average daily discharge of urine was twenty-four ounces. Dr. Winters removed the stitches on the eighth day but did not put on any supporting adhesive straps; the patient burst the wound open and lost sufficient blood to place her in a rather unpleasant condition. An abscess subsequently formed in the abdominal walls at the site of the incision. At the present time thirty-six ounces of urine are discharged daily, and the patient is dressed and about her room some. There is yet pus in the urine, and for the first time the patient has complained of considerable pain in the left side. Dr. Wylie thought the chances were that the left kidney was not perfectly healthy. The kidney removed had been examined by Dr. W. H. Welch, who reported that it was tuberculous and that he found the tubercle bacillus. His diagnosis was primary urino-genital tuberculosis.

DR. A. JACOBI said, to avoid any mistake, he would like to have Dr. Wylie state that he does not consider the existence of floating kidney by itself an indication for its removal.

DR. WYLIE said certainly he would not regard it as proper to remove a kidney simply because it was a floating kidney; but in this case he was inclined to regard it as a dislocated kidney, for the peritoneal tissues are not so lax normally as he found them.

DR. JACOBI said he requested Dr. Wylie to make that statement, and wished to have it put on record, as certainly he should not wish to be understood as favoring any such therapeutical indication. Surely the existence of floating kidneys is no indication whatsoever for their removal. In Dr. Wylie's case there was more than a probability that the kidney was diseased. Floating kidney is not rare. Vollet has published a large number of cases, almost exclusively in women and upon the right side, and many of them in children.

Dr. Jacobi had seen at least thirty cases of floating kidney, chiefly in women who have borne children; a few in children, and also in the adult male.

DR. WYLIE thought that not much could be done in cases of floating kidney by the use of bandages or pads. If pus is found in the urine, even if there is not much discomfort the case should be carefully watched, and if it increase and there was a probability of the occurrence of anything like an abscess, we should operate at once.

DR. HEITZMAN said that he had made three hundred post-mortems in which he found tuberculous kidneys, and in only four was there croupous nephritis and necessarily casts in the urine, whereas in all the other cases there was interstitial or catarrhal nephritis. Tuberculosis of the kidney as a primary lesion is extremely rare. He thought there need be no difficulty in deciding whether or not the other kidney is involved, because as soon as renal epithelium appear in the urine the fact is established that the organ is in an inflamed condition.

STRANGULATED HERNIA—GANGRENE OF THE INTESTINE—ENTEROTOMY.

DR. JOSEPH W. HOWE presented a specimen of gangrenous intestine, removed from a patient in St. Francis' Hospital, who gave the following history:

Adam G——, aged forty-three; occupation, baker;

has had a hernia for thirty years. It gave him little or no trouble until Friday, October 19th, when, during an attack of coughing, he felt a sudden pain in the region of the hernia, which at once became painful and increased in size. Soon afterward he became sick at the stomach, vomited, and was unable to have a movement from the bowels. He was admitted to the hospital on Tuesday, October 23d, in a state of collapse. He complained of pain over the whole abdomen, and vomited small quantities of stercoraceous material. The swelling in the groin was red, tympanitic, and very painful to the touch. Stimulants and morphia were administered, and at 8 P.M. Dr. Howe operated. When the sac was opened the principal portion of the intestine forming the hernial protrusion was found to be gangrenous, and on the inner side of the hernia there was a rupture, which had evidently been made during attempts at reduction. The gangrenous intestine was cut away and the edges of the gut stitched to the integument, making an artificial anus, which Dr. Howe stated would probably never be used, as the patient was then in a dying condition.

The case was presented as an addition to the already large number of cases of strangulated hernia so frequently sent in a dying state to our hospitals by men who seemed to be ignorant of the affection.

DR. VAN SANTVOORD presented a specimen of

STENOSIS OF THE PULMONARY ARTERY,

due to contraction and thickening of the semilunar valves. It was taken from the body of an infant that died at Randall's Island Asylum twenty days after birth. The child was fairly well developed, but had rapid respiration and pulse. Physical examination revealed a loud blowing murmur over the entire chest, loudest to the left of the sternum, at the junction of the third and fourth ribs. At that time the child was not cyanotic, but cyanosis developed gradually, and in the course of a few days it died of cardiac failure.

At the autopsy the semilunar valves of the pulmonary artery were found markedly thickened and contracted, and he thought the tricuspid valve was also somewhat affected. The ductus arteriosus was widely open and lined with a deposit of fibrine. There was also marked hypertrophy of the right ventricle, its wall being nearly as thick as that of the left ventricle. The other organs were normal, except the kidneys, which were slightly congested. The inter-ventricular septum was perfect, and the foramen ovale was patulous to the same extent as is usual in a child of this age.

DR. A. JACOBI thought the nearly equal thickness of the walls of the ventricles was about normal at that period of life. The fact that there was contraction of the valves and not stenosis of the pulmonary opening would indicate that an inflammatory process had existed, and especially as the tricuspid valve was also somewhat involved. He thought it quite probable that endocarditis had occurred during the latter part of pregnancy.

DR. VAN SANTVOORD thought endocarditis was the probable genesis of the case, for the most part at least. He was not quite certain concerning the condition of the tricuspid valve. The hypertrophy of the right ventricle was certainly marked, and he thought that, at the age of twenty days, there is a notable difference, normally, in the development of the two ventricles.

DR. F. FERGUSON presented two specimens of

RUPTURE OF THE HEART.

A male, about fifty years of age, a native of Germany, died suddenly at his own residence, in Brooklyn, the first week in October, 1883. He was well up to within a few hours of his death, when he suffered from an attack of dyspnœa which lasted a short time. Two hours after his dyspnœa subsided he had occasion to use the water-closet, where he was found dead.

The post-mortem examination was made by A. H. P. Leaf, Pathologist to St. Mary's Hospital, in Brooklyn, through whose kindness he received the specimen. The body was well nourished; no marks of violence, and no œdema was present. The peritoneum was normal. The stomach and intestines were normal. The spleen was larger than normal and pigmented. The kidneys were markedly atrophied, their surfaces very granular; cortices were pervaded by numerous small cysts. The tubes of the cortex contained considerable fat and hyaline casts. There were numerous hyaline and granular casts in the tubes of the pyramids, more especially near the apices. The interstitial tissue was markedly increased, many of the glomerules being converted into solid globes of fibrous tissue. The renal vessels were everywhere thickened. The lungs were congested and œdematous. The pericardium was distended with blood. The heart was normal in size. Its muscular tissue was brownish, and its valves were competent. The endocardium was everywhere thickened. There was a linear rupture in the anterior wall of the left ventricle, beginning at a point one and one-half inch above the apex, and extending upward three-fourths of an inch. At the site of the rupture the ventricular wall was about one centimetre in thickness. There was increase in the fibrous tissue and fat in the muscular wall of the ventricle, and the muscle-cells were deeply pigmented.

Dr. Ferguson also presented a specimen of

RUPTURE OF THE HEART IN TETANUS.

A male, forty-four years of age, married, a native of Ireland, and a glazier by occupation. On September 7th last he sustained an injury to his left hand, tearing away the soft parts from its dorsal aspect and exposing the extensor tendons. His injury was dressed antiseptically, and for three weeks he did well; at the end of that time, however, he experienced stiffness and rigidity of the muscles of the face and neck, giving rise to retraction of the head; soon after he was seized with convulsions, which became more frequent and more severe in character until October 13th, when during a convulsion he suddenly died. He had opisthotonos during his convulsions, and suffered greatly from dyspnœa. He was in the hospital only five days, and during that time he could not separate his jaws more than one-fourth of an inch. His pulse was full, strong, and regular, varying from 80 to 90 beats a minute. His temperature ranged from 99° to 101.6° F., and his respiration 40 to 50 a minute. He was treated with fluid extract of physostigma.

On autopsy the brain and cord were found intensely congested. The organs in the abdominal cavity were normal. The lungs were congested and œdematous. The pericardium contained 100 cubic centimetres of pure blood. The cavities of the heart were dilated. The ventricular walls were thin, and the muscular tissue was brownish. The valves were competent; there were a few small patches of atheroma in the segments of the mitral valve. In the anterior border of the heart, one inch to the right of the apex, was a circular opening which admitted a probe one-eighth of an inch in diameter. The right ventricular wall surrounding this opening was about a line in thickness. The muscle-cells of the heart were normal.

DR. H. D. CHAPIN presented a specimen of

PERI-ŒSOPHAGEAL ABSCESS—CARIES OF THE SPINE,

accompanied by the following history:

Mary D——, aged two years and eleven months, was brought to him at the Out-door Department, Bellevue Hospital, September 5th. She had pertussis five months ago, and the mother said she had had bronchitis ever since. On examination she was found to have a slight difficulty in breathing, but not amounting to dyspnœa. On auscultation nothing was heard but tracheal and laryngeal râles. Temperature normal. Nothing was visible in the throat. The child was well nourished and had no rachitic appearance, although she was eleven months old before getting

her first tooth. She came once a week for the following month, and seemed to improve under tonic treatment. The peculiar sounds on inspiration and expiration continued present. The temperature never rose above the normal. There was never any dysphagia. The voice was not at all affected. In the evening of October 10th, after eating a hearty supper, she began playing with her mother, laughing frequently. She was suddenly attacked by a fit of coughing, which was followed by intense dyspnœa, lividity of the face, and death.

Autopsy.—Body well nourished. A large abscess was found back of the œsophagus, within and in front of the first and second dorsal vertebræ, which were deeply carious. The trachea was injected and covered by muco-pus, and had small miliary tubercles in it. Miliary tubercles were also found in the lungs. A large cheesy bronchial gland was found, between which and the sac of the abscess the right pneumogastric nerve was apparently pressed upon just where the cardiac nerves were given off. Just above this point the right vagus seemed somewhat swollen.

Dr. W. M. Carpenter, in behalf of Dr. J. W. Stickler, presented a specimen of

SCIRRHOUS CARCINOMA OF STOMACH, INVOLVING THE LIVER, INTESTINE, AND SPLEEN.

Adam S——, aged fifty-two, native of Germany. No history of cancer in family. Patient was perfectly well up to fifteen months ago. At that time he complained of quite severe pain in the left hypochondrium, but had no fever or organic disease that could be discovered. Palpation revealed no tumor in abdomen. Bowels were somewhat costive; micturition normal. Under the influence of anodynes and counter-irritants he improved somewhat, but was never entirely free from pain, which gradually extended to the right hypochondrium. He rapidly emaciated, having but little appetite, and repeatedly vomited the food taken. There was, however, no vomiting of either pure blood or chocolate-colored matter. This condition would last about one week, to be followed by nausea; then the vomiting would recur, and in this manner the alternation was maintained till death. The bowels became very constipated and urination very frequent, painful, and scanty. Chemical and microscopic examination at that time revealed nothing abnormal. Retention of a very small quantity of urine, beginning about six weeks before death, necessitated the frequent use of the catheter. The severe pain had now extended to every region of the abdomen and the emaciation became extreme. There was also a very manifest cachexia. Physical examination disclosed a tumor, hard and irregular in outline, in the region of the pyloric end of the stomach, although nothing positive could be ascertained with reference to the other abdominal organs. Death from exhaustion finally supervened, fifteen months from the date of the first attack of abdominal pain. At the post-mortem I discovered the following condition: The cæcum was bound to the inner surface of the abdomen by strong fibrous bands, and so much constricted that it seemed improbable that any fecal matter had passed through it prior to death. The transverse colon was drawn down and attached to the ascending colon, and it was also attached to the gall-bladder and spleen. The liver was small and quite firm in consistence, and attached to the spleen by broad fibrous bands. The œsophagus apparently lay between these two organs, and was firmly adherent to them. The stomach was below and behind the liver, and much smaller than normal. Its anterior wall was greatly thickened, especially that portion of it nearest the pyloric end of the organ. The interior of the viscus presents fibrous bands connecting opposing surfaces, also various sacculations. The kidneys presented nothing abnormal macroscopically, except quite intense congestion. A microscopical examination of a portion of the morbid growth revealed many of the characteristic features of a scirrhous carcinoma.

Dr. J. C. Peters made a verbal supplementary report on

EQUINE SCARLET FEVER,

after which the Society went into executive session.

Correspondence.

TYPHOID FEVER AND MILK.

To the Editor of The Medical Record.

Sir: There have been here during the past two or three weeks, in one locality comprising three or four blocks, ten cases of continued fever—three adults, the rest children under ten years of age. Four of the cases (two of adults) assumed a typhoid character.

Investigation showed that all of the families received their milk from one milkman, in whose house had been one of the typhoid cases for four or five weeks. The milk was stopped in all cases; all are recovering. In one of the typhoid cases there was marked improvement within forty-eight hours after stopping the milk. It was noted that several other children in the neighborhood not supplied by this milkman remained well. It seemed settled in the community that the disease was propagated through the milk.

But now, on the other hand: 1. The patient in the house of the milkman was in an upper room of an adjoining wing to the house, and had been free from fever for ten days or more previous to inception of the disease by some of the others. 2. The milk was not brought into the house proper at all, but into the cellar, where it was at once measured and sent out by a man who had no contact with the patient. Consequently the milk was not on the premises but a very short time. 3. The cellar was perfectly clean and well ventilated, and had no interior communication with the house. Is entered from outside only. 4. The cows were all healthy, in good condition, and fed only on the best of food. No slops of any kind. 5. I examined the well-water in which the milk vessels were washed, chemically and microscopically, and could detect nothing abnormal. Besides, the well was cleaned a few weeks ago.

There is no cesspool on the premises, and the outhouse is far away from the well. In addition, some of the sick children had never drank the milk, but had used a little on oatmeal or hominy. Again, the number sick was only a portion, a small percentage, of those supplied by the same milkman who have remained well while still continuing use of the milk. And finally, the disease prevails more or less throughout the town in other localities where this milk was never used. In the adjoining street there were nearly as many cases as those cited.

The one patient whose improvement was coincident with stopping the milk had reached the fourteenth day, the period when most of the cases began to convalesce. From all which I find myself unable to establish any connection between these cases and the milk-supply, *unless possibly* in the fact that the woman who gave care in part to the patient in the house also washed the milk vessels, using *hot* water first, then cold.

My own judgment is against the conclusion. May I beg the favor of the Editor's opinion in the matter, which has interested our entire community, and oblige,

Respectfully,

D. A. Baldwin, M.D.

Englewood, N. J., November 13, 1883.

[We fail to see any direct connection between the milk-supply and the cases of fever.—Ed.]

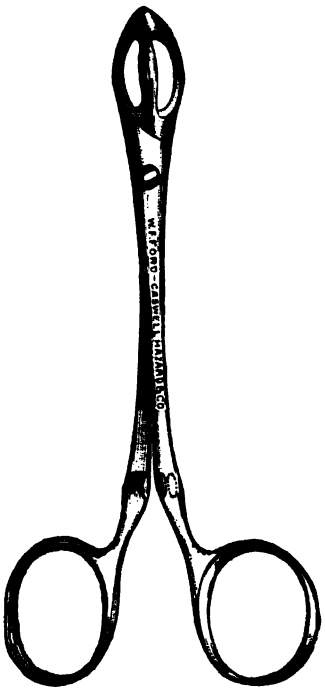
Oil of Birch and Oil of Wintergreen.—According to Mr. G. W. Kennedy (*New Remedies*), the oil of wintergreen of the shops is really in large part oil of birch. Chemically and physically the two oils are very nearly identical, so that the adulteration is harmless.

New Instruments.

A NEW STYLE OF FORCI-PRESSURE FORCEPS OR ARTERY CLAMPS.

By JAMES L. LITTLE, M.D.,
NEW YORK.

The accompanying cut shows a new style of artery clamp which has been made for me by Mr. Ford, of Caswell, Hazard & Co.



I do not doubt that of late years all surgeons have been in the habit of using some style of clamp to control the hemorrhage from small vessels during the progress of an operation, thus saving themselves the delay of tying. I have been in the habit of thus controlling hemorrhage for some years past, but owing to the narrow blades and slim points of the clamps now in use, have never been able to find one that would allow of the tying of the vessel without first removing the clamp and seizing the bleeding point again with an ordinary pair of "bull-dog" forceps. I found that there was always more or less blood lost in this way, which I concluded could be saved by combining both clamp and artery forceps in one instrument, and I have been so well satisfied with the result of the experiment that I have thought it worthy of presentation to the profession.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 10 *to November* 17, 1883.

BACHE, DALLAS, Major and Surgeon. Ordered to report in person to the commanding general Department of the East for assignment to duty. S. O. 259, par. 10, A. G. O., November 12, 1883.

GARDINER, J. DE B. W., Captain and Assistant Surgeon. Relieved from duty at Fort Huachuca and assigned to duty as Post Surgeon at Fort Bowie, A. T. S. O. 104, par. 1, Department of Arizona, November 8, 1883.

EGAN, PETER R., First Lieutenant and Assistant Surgeon. Upon being relieved from duty at Fort Bowie, A. T., to proceed without delay to Fort Huachuca and report to the commanding officer at that post for duty. O. 104, par. 1, Department of Arizona, November 8, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 17, 1883.

HALL, C. H. H., Passed Assistant Surgeon. Ordered to the Naval Academy, Annapolis, Md.

HOW TO TAKE TINCTURE OF IRON.—To disguise the taste of tincture of iron, Dr. Haner recommends that tincture of the sesquichloride of iron be mixed with simple syrup, and then with milk. This mixture will not affect the teeth, nor will the styptic taste be apparent.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 20, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 13, 1883.....	1	50	67	3	22	43	0	0
November 20, 1883.....	0	32	44	1	51	39	1	0
Deaths.								
November 13, 1883.....	1	21	8	1	1	23	0	0
November 20, 1883.....	0	13	9	1	6	22	0	0

A FORMULA FOR IRREGULAR HEART-ACTION.—In a discussion upon heart disease before the Boston Society for Medical Improvement, Professor Bowditch said that he had found the following formula of great service in relieving even serious cardiac affections: Pulv. digitalis, gr. x.; pulv. colchici sem., gr. xx.; sodi bicarbonatis, gr. xxx. M. et div. in pil. no. xx. These are to be taken three or four times daily at first, subsequently to be reduced until only one is taken at bedtime. The treatment to be continued for three to nine months.

AN EASILY ADJUSTABLE HANDLE FOR THE LARYNGOSCOPIC AND RHINOSCOPIC MIRROR, as well as laryngeal probe, is the ordinary automatic pencil-holder made by the Eagle Pencil Co., and sold by stationers generally. The handle of the mirror is held in place in the same manner as the lead, and can be lengthened or shortened by pressure on the spring at the end of the holder. After several months' trial it has been found most satisfactory, from its smoothness and the short time required to adjust it.—*Philadelphia Polyclinic.*

FRAUDULENT ADVERTISEMENTS.—The Denver *Inter-Ocean* discourses with emphasis upon the subject of patent medicine and other advertisements. The editor says: "We like to fill our columns with good advertising, and we believe that we give our patrons dollar for dollar. We have no desire for fraudulent advertisements, or for advertisements that discuss queer diseases. We threw out Lydia Pinkham's chromo because the agents unjustly claimed nine fouls in twenty-five insertions. We do not stand that sort of discount. . . . We are not advertising piles! piles! piledrivers, lost manhood, or lewd shows; and we are not booming torpid livers in our fashion column. We are not giving the nostrum quacks cheap advertising. They must pay us what home advertisers pay. To charge home advertisers full rates, and then to give space to Eastern patent medicines for less money, isn't our idea of honesty."

MATRIMONIAL ENGAGEMENTS AND UTERINE POLYPI.—The defendant in a recent breach of promise case in Mercer County, O., based his defence on the fact of the development of a fibrous polypous tumor in the uterus of his betrothed. This would seem to be a valid excuse for a man's not marrying a woman, but the plaintiff claimed that the growth was produced by and resulted from the protracted courtship, causing her to brood upon the prospects of entry into married life. It was proved by experts that prolonged courtship is harmful, superinducing a condition of erethism, and the jury awarded the plaintiff a verdict of $3,000 as a balm for her wounded feelings and polypoid uterus.—*Medical Age.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 22 NEW YORK, DECEMBER 1, 1883 Whole No. 682

Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

BY J. LEWIS SMITH, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Continued from p. 561.)

Symptoms.—During the prevalence of cerebro-spinal fever cases now and then occur in which the symptoms are mild and transient, and the health is soon fully restored. It seems proper to regard some, at least, of these as genuine but aborted forms of the disease. The following cases which occurred in my practice may be cited as examples:

A boy, eight years of age, previously well, was taken with headache, vomiting, and moderate febrile movement, on April 2, 1872. The evacuations were regular and no local cause of the attack could be discovered. On the following day the symptoms continued, except the vomiting, but he seemed somewhat better. On April 4th the febrile movement was more pronounced, and in the afternoon he was drowsy and had a slight convulsion. The forward movement of the head was apparently somewhat restrained. On the 6th the symptoms had begun to abate, and in about one week from the commencement of the attack his health was fully restored.

A boy, aged six, was well till the second week in May, 1872, when he became feverish and complained of headache. At my first visit, on May 14th, he still had headache, with a pulse of 112. The pupils were sensitive to light, but the right pupil was larger than the left. The bromide and iodide of potassium were prescribed, with moderate counter-irritation behind the ears. The headache and febrile movement in a few days abated, the equality of the pupils was restored, and within a little more than one week from the commencement of the disease he fully recovered.

These cases occurred when the epidemic of 1872 was at its height; but if the symptoms are so mild, and the duration of the disease short, as in these two cases, the diagnosis must sometimes be doubtful. Observers in different epidemics report similar cases, and as the symptoms, so far as they appeared in my patients, seemed characteristic, I have not hesitated to regard them as genuine but aborted cases. On such patients the epidemic influence acts so feebly, or their ability to resist it is so great, that they escape with a short and trivial ailment.

Occasionally, also, during the progress of an epidemic we meet patients who present more or fewer of the characteristic symptoms, but in so mild a form that they are never seriously sick, and never entirely lose the appetite, but the disease, instead of aborting, continues about the usual time.

Thus, on January 4, 1873, I was called to a girl aged thirteen, who had been seized with headache followed by vomiting in the last week in December. During a period of six to eight weeks, or till nearly March 1st, she had the following symptoms: Daily paroxysmal headache, often most severe in the forenoon; neuralgic pain in the left hypochondrium, and sometimes in the epigastric region; pulse and temperature sometimes nearly normal, and at other times accelerated and elevated, both with daily variations; inequality of the pupils, the right being larger than the left during a portion of the sickness. The patient was never so ill as to keep the bed, usually sitting quietly during the day in a chair or reclining on a lounge, and she never fully lost her appetite. Quinine had no appreciable effect on the fever or paroxysms of pain. There can, in my opinion, be little doubt that this girl was affected by the epidemic, but so mildly that there was, for a considerable time, much uncertainty in the diagnosis.

Cases like these, in which the disease is so feebly developed that the patient is never seriously sick, though unimportant pathologically, must be recognized in a treatise on cerebro-spinal fever.

Mode of commencement.—Cerebro-spinal fever rarely begins in the forenoon after a night of quiet and sound sleep. In the cases which I observed in the severe and fatal epidemic of 1872, and in the thirty-six cases to be tabulated in the next RECORD, the commencement was almost without exception between mid-day and midnight. The fact that this disease does not commence after the repose of night, till several hours of the day have passed, shows the propriety and need of enjoining a quiet and regular mode of life, free from excitement, and with sufficient hours of sleep, during the time in which the epidemic is prevailing.

The commencement is usually without premonitory stage, and sudden; unlike, therefore, the beginning of other forms of meningitis, which come on gradually and are preceded by symptoms which, if rightly interpreted, direct attention to the cerebro-spinal system. Exceptionally certain premonitions occur for a few hours or days before the advent of the disease, such as languor, chilliness, etc. Mild cases more frequently begin gradually, and with certain premonitions, than severe cases. The ordinary mode of commencement is as follows: The patient is seized with vomiting, headache, and perhaps a chill or chilliness, so that there is a sudden change from perfect health to a state of serious sickness. Rigor or chilliness is a common initial symptom, especially in adult patients. One patient, an adult female, had three or four chills of considerable severity in the commencement of the attack. Children often have clonic convulsions in place of the chill, or immediately after it, partial or general, slight or severe. Stupor more or less profound, or less frequently delirium succeeds. In the gravest cases semi-coma occurs within the first few hours, in which patients are with difficulty aroused, or profound coma, which, in spite of prompt and appropriate treatment, is speedily fatal. Those thus stricken down by the violent onset of the disease, if aroused to consciousness, complain of severe headache, with or without, or alternating with equally severe neuralgic pains in some part of the trunk, or in one of the extremities. The pain frequently shifts from one part to another. Among the early symptoms of cerebro-spinal fever are those which pertain to the eye. The pupils are dilated, or less frequently contracted, and they respond feebly, or not at all, to light if the attack be severe and dangerous; often they oscillate, and occasionally one is larger than the other. Vomiting, with little apparent nausea, and often projectile, is common in the commencement of cerebro-spinal fever. It occurred as an early symptom in fifty-one of fifty-six cases observed by Dr. Sanderson. In ninety-seven cases occurring in

New York, most of them observed by myself, but a few of them related to me by the late Dr. John G. Sewall, vomiting occurred as an early symptom in sixty-eight cases. Its absence on the first day was recorded in only three cases, while in the remaining twenty-seven patients the records of the first day make no mention of its presence or absence. It was probably present in most of these twenty-seven cases as one of the first symptoms.

Since the epidemic of 1872, in examining patients now numbering thirty-six, as has been already stated, I have made careful enquiry in regard to the mode of commencement, and with only two or three exceptions the previous health had either been good, or if symptoms of ill-health antedated the cerebro-spinal fever, they were due to some ailment entirely distinct from this disease. In a boy four and a half years of age, living in Broadway, it was stated to me that the cerebro-spinal fever came on gradually, with pains in the head and elsewhere; this case was mild throughout, and the patient was never in imminent danger. In nearly all the cases, if the patients were at home and under observation, the exact moment of the beginning of the disease could be stated. Thus a man aged twenty-eight returned from his work at mid-day, April 23, 1883, in good health and cheerful, ate a hearty meal at 12 M. and at 1 P.M. had a chill, with intense headache and severe vomiting. Minute red points appeared in his face after the vomiting, from capillary extravasations. In this case the interesting fact was observed of a cessation of the symptoms, so that on the 24th and 25th, being free from pain, he went to Brooklyn. On the 26th, however, the symptoms returned. He had pains in the head, back, and extremities, and was seriously sick. Occasional remissions, so that very grave symptoms become mild for a time, and then return in full severity, as well as distinct intermissions as in this case, have been frequently noticed by observers in different epidemics. A little girl, previously entirely well, was slightly punished on June 11, 1882; immediately she vomited, and seemed quite sick; by kind nursing on the part of the mother she became better, so that on the 12th she had some appetite and went out. On the 13th, cerebro-spinal fever began, with a temperature of 103°, and its course was tedious. A robust girl, aged thirteen, vivacious and cheerful, went as usual in the morning to one of the public schools, entirely well. Before the school was dismissed she returned home crying, on account of dizziness and violent pain on the top of her head, in her knees, and calves of the legs. The case was attended by Professors Alonzo Clark, Knapp, and myself, and was fatal after four and a half weeks. A boy, aged ten, returned from another public school in a similar manner, having gone to it in the morning in apparent perfect health.

We may, therefore, summarize as follows the symptoms which commonly attend the commencement of cerebro-spinal fever: violent pain in some part of the head, and sometimes also in the trunk or limbs, vomiting, a chill or chilliness, clonic convulsions, dizziness, dilated, sluggish, or altered pupils, fever of greater or less intensity according to the severity of the attack, heat of head, and in most patients of the surface generally. If the disease be of a severe and dangerous type, these symptoms are apt to be followed within a few hours by delirium, semi-coma, or coma.

SYMPTOMS.

Nervous system.—Since in cerebro-spinal fever extensive and intense inflammation occurs of the cerebral and spinal meninges, with more or less congestion of the brain and spinal cord, lesions, which we will consider hereafter, we would expect that this disease would be attended by severe and dangerous symptoms, inasmuch as the cerebro-spinal axis exerts such a controlling influence upon the functions of the body. Also we would expect that the symptoms would vary according to the portion of the meninges which happens to be most severely inflamed. There is, indeed, variation in symptoms according to the extent and intensity of the meningitis, and the degree in which the cerebro-spinal axis is congested or implicated, but certain symptoms occur in all or nearly all cases, and as they are characteristic they render diagnosis easy.

Pain, already described as an initial symptom, continues during the acute period of the malady. It is ordinarily severe, eliciting moans from the sufferer, but its intensity varies in different patients. Its most frequent seat is the head, and the location of the cephalalgia varies in different patients and in the same patient at different times. One refers it to the top of the head, another to the occiput, and another to the frontal region, and the same patient at different times may complain of all these parts. The pain is described as sharp, lancinating, or boring. It is also common in the neck, especially in the nucha, the epigastrium, umbilical, and lumbar regions, along the spine (rachialgia), and in the extremities, where it shifts from one part to another. It is more common and persistent in the head and along the spine than elsewhere. The patient, if old enough to speak, and not delirious or too stupid, often exclaims, "Oh! my head," from the intensity of his suffering, but after some moments complains equally of pain in some other part, while perhaps the headache has ceased or is milder. In a few instances the headache is absent, or is slight and transient, while the pain is severe elsewhere. After some days the pain begins to abate, and by the close of the second week is much less pronounced than previously. Vertigo occurs with the headache, so that the patient reels in attempting to stand or walk. I have stated above that vertigo may be a prominent initial symptom, as in the girl of thirteen years, who suddenly became sick in the public school where she was attending, and reached her home with difficulty on account of the headache and dizziness. Contributing to the unsteadiness of the muscular movements is a notable loss of flesh and strength, which occurs early and increases.

The state of the patient's mind is interesting. It is well expressed in ordinary cases by the term apathy or indifference, and between this mental state and coma on the one hand, and acute delirium on the other, there is every grade of mental disturbance. Some patients seem totally unconscious of the words or presence of those around them, when it subsequently appears that they understood what was said or done. Delirium is not infrequent, especially in the older children and adults. Its form is various, most frequently quiet or passive, but occasionally maniacal, so that forcible restraint is required. It sometimes resembles intoxication or hysteria, or it may appear as a simple delusion in regard to certain subjects. Thus one of my patients, a boy of five years, appeared for the most part rational, protruding his tongue when requested, and ordinarily answering questions correctly, but he constantly mistook his mother—who was always at his bed-side—for another person. Severe active delirium is commonly preceded by intense headache. In favorable cases the delirium is usually short, but in the unfavorable it is apt to continue with little abatement till coma supervenes.

On account of the pain and the disordered state of the mind, patients seldom remain quiet in bed unless they are comatose, or the disease be mild or so far advanced that muscular movements are difficult from weakness. In severe cases they are ordinarily quiet for a few moments, as if slumbering, and then, aroused by the pain, they roll or toss from one part of the bed to another. One of my patients, a boy of five years, repeatedly made the entire circuit of the bed during the spells of restlessness. In mild cases, or cases attended by less headache or mental disturbance, patients are quiet, usually with their eyes closed, unless when disturbed.

Hyperæsthesia of the surface is another common symptom. Few patients, not comatose, are free from it during the first weeks, and it materially increases the suffer-

ing. Friction upon the surface, and even slight pressure with the fingers upon certain parts extort cries. Gently separating the eyelids for the purpose of inspecting the eyes, and moving the limbs, or changing the position of the head, evidently increase the suffering, and are resisted. I have sometimes heard such expressions of suffering from slowly introducing the thermometer into the rectum that I was led to believe that the anal and perhaps rectal surfaces were hypersensitive. The hyperæsthesia has diagnostic value, for there is no disease with which cerebro-spinal fever is likely to be confounded in which it is so great. It is due to the spinal meningitis, and is appreciable even in a state of semi-coma. The headache and hyperæsthesia fluctuate greatly in the course of the disease, and the former sometimes recurs at times, especially from mental excitement, or from an afflux of blood to the brain from physical exertion, for months after the health is otherwise fully restored.

Some contraction of certain muscles or groups of muscles is present in all typical cases. In a small proportion of patients it is absent or is not a prominent symptom, namely, in those in whom the encephalon is mainly involved, the spinal cord and meninges being but slightly affected or not all. This contraction is most marked in the muscles of the nucha, causing retraction of the head, but it is also common in the posterior muscles of the trunk, causing opisthotonos, and in less degree in those of the abdomen and lower extremities, and hence the flexed position of the thighs and legs, in which patients obtain most relief. The muscular contraction is not an initial symptom. I have ordinarily first observed it about the close of the second day, but sometimes as early as the close of the first day, and in other instances not till the close of the third day. Attempts to overcome the rigidity, as by bringing forward the head, are very painful, and cause the patient to resist. In young children having a mild form of the fever, with little retraction of the head, the rigidity is sometimes not easily detected. I have been able in such cases to satisfy myself and the friends of its presence, by placing the child in an upright position, as on the lap of the mother, and observing the difficulty with which the head is brought forward on presenting to the patient a tumblerful of cold water, which is craved on account of the thirst. The usual position of the patient in bed, in a typical or marked case, is with the head thrown back, the thighs and legs flexed, with or without forward arching of the spine. The muscular contraction and rigidity continue from three to five weeks, more or less, and abate gradually; occasionally they continue much longer. Through the kindness of Dr. Henry Griswold I was allowed to see an infant of seven months in the tenth week of the disease. It was still very fretful, and exhibited decided prominence of the anterior fontanelle, probably from intra-cranial serous effusion and marked rigidity of the muscles of the nucha, with retraction of the head.

Paralysis is another occasional symptom, but complete paralysis of any muscle or group of muscles is less frequent than one would suppose from the nature of the malady. It may occur early, but is sometimes a late symptom. It may be limited to one or two of the limbs, as the legs, or an arm and a leg, or it may be more general. In a case occurring in Roosevelt Hospital, and published in the New York MEDICAL RECORD for October 10, 1878, the patient, a boy of ten years, was unable to move his legs one hour after the commencement of the disease. This sudden development of paraplegia in the commencement of cerebro-spinal fever resembled that of infantile paralysis, and was probably due to the same cause, to wit, active inflammatory congestion of the anterior cornua of the spinal column. The sudden and complete loss of speech which occurs in certain cases, when consciousness is retained and the vocal organs are in their normal state, seems to be due to the fact that the portion of the brain which controls the function of speech is acutely congested, or is the seat of effusion. Thus, in June, 1882, a girl of three years, whom I attended, lost her speech on the second day of cerebro-spinal fever, and she was unable to articulate even the simplest word for two and a half months. Finally she began to utter slowly and with difficulty the easiest monosyllables, and now, after a lapse of more than a year, her speech is slow and lisping, while her hands are tremulous and unsteady. She is easily fatigued and cries often from over-sensitiveness. During the long period of speechlessness she daily made efforts to talk, but without uttering a sound. Strabismus, to which we will allude hereafter in treating of the eye, is a common symptom, either transient or protracted, due to paralysis of certain of the motor muscles of the eye.

Paralysis of more or fewer muscles has been noticed and recorded by many observers in this country and in Europe. Dr. Law observed a patient in the epidemic of 1865, in Dublin, who could move neither arms nor legs, and Wunderlich saw one who had paralysis of both lower extremities and a considerable part of the trunk. As this symptom is due to the inflammatory process in the cerebro-spinal axis, it usually disappears in a few weeks as the inflammation abates and absorption of the inflammatory products occurs, but it may be more protracted. In Wunderlich's case there was only partial recovery from the paralysis after the lapse of five months.

Clonic convulsions have already been alluded to among the early symptoms of the attack. They indicate a grave form of the disease, and are not infrequent in young children, in whom they appear to occur in place of the chill which is common in those of a more advanced age. The eclamptic attack may be short and not repeated, or it may be protracted, or return again and again when the medicines which control it are suspended. Under such circumstances it is apt to end in profound coma, and is, of course, a symptom of great gravity. Thus an infant of seven months had unilateral eclamptic attacks daily during the first week of the attack. The mother informed me that the convulsions seldom lasted longer than three minutes, and that the intervals between them were short. The child recovered with loss of sight from the cerebro-spinal fever, but still after the lapse of a year, when I examined him, had symptoms which were apparently due to hydrocephalus. Another infant of eleven months had clonic convulsions nearly constantly during the first twenty-four hours, but with occasional brief intermissions. On the following day he was in profound coma, and apparently dying, with a temperature of 105°. To my astonishment he gradually emerged from the state of unconsciousness, and after a week was able to sit in his cradle long enough to take drinks.

Occasionally eclampsia does not occur in the first days, but in the second or third week, when it is usually accompanied by an increase of other symptoms, due to a recrudescence of the disease. A female infant, aged eleven months, treated by me in 1882, had been sick one week, when, during an increase in the febrile movement, she had one eclamptic seizure. Her recovery though slow was complete. A boy, aged eleven and one-half years, whose attack began with a chill, violent headache, and a febrile movement, and whom I visited frequently, died on the fourth day. Clonic convulsions did not occur in his case until within twenty-four hours of his death, when he had six seizures, which ended in coma.

Though adult patients are much less liable to eclampsia than children, they are not entirely exempt. A male patient, aged twenty-eight years, whom I saw in consultation, had a single clonic convulsion lasting ten to fifteen minutes on the third day of his illness. In five weeks he had fully recovered, except that his headache returned upon any excitement. Even drinking a cup of beer caused it. Clonic convulsions are, however, much less common than tonic muscular contraction and rigidity already alluded to. This occurs to a greater or less extent in nearly all cases, and is a symptom of diagnostic value, the rigidity often extending to the muscles of the

extremities. Thus in a child, aged three years, who had no eclampsia, the tonic contraction of the muscles of the extremities did not relax till after the twelfth day.

Choreic or choreiform movements are occasionally observed. I do not allude to the tremulousness which sometimes occurs from weakness, or as a premonition of eclampsia, but a movement which has the character of true chorea. An infant, aged ten months, began to have choreic movements during the acute stage of the disease, most marked in the upper extremities, and ceasing in sleep. They continued during the remainder of the life of the child, death occurring ten months subsequently of diphtheria. Rarely a choreiform movement of the eyes is also observed, a lateral movement from right to left and left to right. I have seen from recollection two such cases.

Drowsiness, already alluded to, is a common symptom, and it exists in all grades, from slight stupor to profound coma. In some patients it is present from the first hour, while in others it occurs after a period of restlessness or delirium, or it alternates with it. Stupor more or less profound is common after the attack of eclampsia or the chill. That it is a frequent symptom in severe cases receives ready explanation from the state of the brain and its meninges, for the exudation which occurs upon the surface of the brain and the serous effusion within the ventricles are sufficient to cause it, by compressing the cerebral substance. It is surprising in some cases how profound the stupor may be, a state indeed of coma, and yet the patient gradually emerges from it and recovers. In the epidemic of 1872, in New York City, when the malady was new to us, many physicians predicted certain death, and employed remedies without expectation of any benefit, on account of the apparently hopeless state of patients, who seemed to be in profound coma, and yet not a few of them gradually and fully recovered.

Digestive system.—Vomiting, which is the most prominent symptom referable to the digestive system, has already been alluded to. Occurring early in the disease, it may cease in a few hours, or not till after several days, and often it returns during the periods of recrudescence, which are common in the progress of the fever. It occurs with little effort, and without previous nausea, or with little nausea, as is usual when it has a cerebral origin. It does not differ as a symptom from the vomiting which is so common in other forms of meningitis. The substance vomited consists of the ingesta and the secretions, as mucus and bile. Having a similar origin is a sensation of faintness or depression referred to the epigastrium.

The appetite is usually impaired or lost during the active period of the attack, and it is not fully restored till convalescence is well advanced. Occasionally considerable nutriment is taken, and with apparent relish, as by one of my patients, twenty-eight years of age, who always had some appetite. Ordinarily, on account of repeated vomitings, constant febrile movement, impaired appetite and digestion, patients progressively lose flesh and strength, so that in protracted cases emaciation is always a prominent symptom, and is often extreme. Great emaciation and loss of strength, which attend many cases after the lapse of several weeks, greatly diminish the chances of a favorable termination. Thirst, already alluded to, and constipation are common in this as in other forms of meningitis, but retraction of the abdomen is not a notable symptom, except in protracted and greatly wasted cases. The diarrhœa which is occasionally present in cerebro-spinal fever in the summer months must be regarded as a distinct disease and a complication. The tongue, buccal, and faucial surfaces present nothing unusual in their appearance. It is seldom that the sordes and dry and brownish fur occur, which are so common in typhus and typhoid fevers, even in the most protracted and emaciated cases. The tongue is usually moist and but slightly furred.

I have seen in consultation two patients that perished early with inability to swallow as the prominent symptom, attended in both by an abundant secretion upon the faucial surface, without any redness, swelling, or other evidence of inflammation. The early death of these young children, whose ages were ten months and two years, rendered the diagnosis less certain than in most other patients, but the attending physicians as well as myself diagnosticated cerebro-spinal fever with suddenly developed paralysis of the muscles of deglutition, so that no nutriment could be taken. If our understanding of these interesting cases were correct, the paralysis was caused by lesion of that portion of the medulla oblongata which controls the function of deglutition, or else from injury of the intra-cranial portions of the nerves which supply the muscles concerned in this act. The following were the cases alluded to:

O——, male, two years of age, became feverish and dull, but without vomiting, on October 22, 1882; axillary temperature, 102°. On the following day the inability to swallow occurred, and the muscles of deglutition appeared totally inactive. Death occurred on the third day, suddenly, and apparently easily, as if from arrested function of important nerves, especially the pneumogastric. The abundant secretion of thin mucus or transudation of serum covering the faucial surface, and reaccumulating as soon as removed, without any notable change in the appearance of the fauces, was remarkable. The physician in attendance, who for more than thirty years had had a large city practice, had seen no similar case, nor had I at the time.

Soon afterward the second case occurred. An infant of ten months, without cough or embarrassment of respiration, or faucial redness or swelling, lost the power of deglutition soon after the commencement of the supposed cerebro-spinal fever, so that in the attempts to swallow the drinks entered the larynx, and the secretion or exudation was abundant as in the other case. Death occurred in forty-eight hours. The rectal temperature was only 101°.

In another case, ultimately fatal, and in which the diagnosis of cerebro-spinal fever was certain, a robust girl, aged twelve, suddenly lost the power of deglutition at one time during her sickness, although she was entirely conscious and repeatedly endeavored to swallow. The ability to swallow returned in a few days.

(To be continued.)

IMMEDIATE OPERATION FOR LACERATION OF THE PERINEUM.[1]

By R. C. M. PAGE, M.D.,
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It has been, and is now a question, in cases of laceration of the perineum during parturition, whether the immediate or the secondary operation should be performed.

In cases of slight rupture no operation may be absolutely necessary, as the parts may, and frequently do, heal sufficiently to render the perineum nearly as good as it was originally.

In cases of extensive rupture, however, all authors agree that one or the other operation must be performed, since it is the rare exception for such lacerations to heal by first intention when left to themselves. I do not remember ever to have seen one. Lusk, in his work entitled "The Science and Art of Midwifery," page 576 (New York: D. Appleton & Co., 1882), says: "Only a very credulous person really believes that he has witnessed union by first intention in extensive ruptures as the result of tying the knees together and enjoining rest upon the side."

Playfair, of London, recommends the immediate operation, even in the severer forms of rupture extending back to, or even through, the sphincter ani. He also recommends the immediate operation in slight cases, in

[1] Read before the Northwestern Medical and Surgical Society, November 21, 1883.

order to make sure of union by first intention, and for this purpose he uses one or two interrupted sutures of silver wire or carbolized catgut at once. Edis, of London, is of the opinion that where the sphincter ani, or recto-vaginal septum, is not seriously involved so as to make the operation a serious or lengthy one, the immediate operation should be performed; but that the laceration may be so extensive, or from special causes the primary operation may not be deemed expedient, and the secondary operation will then have to be performed later on.

Lusk (*op. cit.*, page 576) says: "To the immediate operation there can be no valid objection. It is not difficult, it is not extremely painful, and its performance, as a rule, diminishes the risks of infection and shortens the puerperal period. In private practice failure is the exception."

Hospital statistics regarding the immediate operation for lacerated perineum appear to be for the most part wanting. From inquiries made, however, at the various lying-in hospitals in this city, I learned that it was always performed when necessary, and that the result has been usually successful. Dr. H. Frankenburg, of Bellevue Hospital, reports 18 cases recorded at the Emergency Hospital; of these, 11 were cured and 7 were failures. Dr. Kate Parker, of the Infant Asylum, reports 4 cases as recorded at that institution; of these 2 were cured and 2 failed. Dr. C. Remsen, of the Nursery and Child's Hospital, reports 2 cases, both cured, and Dr. Stanton Allen, of the Lying-in Asylum, 85 Marion Street, reports 1 case; it was operated on a short time ago by the attending physician, Dr. Henry D. Nicoll, and union was perfect.

Of a total number of 25 recorded hospital cases, therefore, 16 were cured and 9 were failures.

These few statistics are insufficient to warrant any decision on the subject, but they go to show that even in hospital practice the immediate operation is frequently successful; more so now, perhaps, than it was eight or ten years ago. Dr. W. R. Gillette, in the "Report of the Lying-in Service of the New York Charity Hospital, 1875," states under head of Forceps Deliveries: "The perineum was lacerated to the second degree in two cases. The rents were sewed up in each case by silver wire, but with generally unsatisfactory results. It is the practice of our service to sew up all rents of the perineum immediately upon their occurrence. The results are hardly such as to encourage us in the continuance of the practice, for we never get complete union when the perineum is entirely torn through. In rents of the second degree we occasionally succeed. The superficial rents of the perineum seem to unite just as well when we treat them by the postural method of tying the legs together." The results in cases of the secondary operation, as recorded at the Woman's Hospital in this city, are, I believe, much more favorable than those obtained by the immediate operation in the various charitable lying-in hospitals. It must be remembered, however, that patients at the Woman's Hospital are usually from the better classes, and have surroundings and conveniences equal, if not superior, to those that can be obtained at any hotel or private residence. They should, therefore, be properly classified among those in private practice.

The total number of cases of lacerated perineum admitted to the Woman's Hospital since its opening in April, 1855, up to September 15th of the present year, is 809, of which 26 were not treated or the result was not stated. Of the remaining 783 cases in which the secondary operation was performed, 364 have been recorded as "laceration of the perineum and cervix uteri." They must, therefore, be omitted, since of those reported improved it is not stated whether the perineum or cervix uteri is meant. Of the remaining 419 cases, 313 were cured, 83 were improved, 21 were not improved, and there were two deaths—one from rapid septicæmia, with metastatic parotitis following the operation, and one from a supervening attack of pneumonia.

Whatever be the result in hospitals, failure of the immediate operation in private practice is the rare exception. Of a collection of 100 cases, including all degrees of rupture, 90 were cured, 9 improved, and 1 was not improved. The latter was due to hemorrhage from the wound. In the 9 improved cases union was incomplete, and in each case a small fistulous opening into the vagina remained. This was doubtless due to the cutting out of sutures.

So far as regards these two operations, therefore, I believe that, other things being equal, the immediate operation in private practice, at least, is as uniformly successful as the secondary. This being true, there are numerous evident reasons why the immediate operation should be performed. It can but fail, and in that case the secondary operation can be performed afterward.

In slight cases there is no necessity for anæsthetics, but where the laceration is extensive they may be required. The wound should be thoroughly cleansed with a three per cent. carbolic or other antiseptic lotion before closing it, and, as an additional precaution, a sponge wrung out of the same material may be placed against the os uteri during the operation. In cases of extensive rupture, extending into the rectum and high up in the vagina, these parts may be closed first with carbolized catgut sutures, after Simon's method. The rest should then be closed by means of the interrupted suture. Giving opium for the purpose of constipating the bowels is bad practice. If the patient can pass her urine let her do so; it does not in the least interfere with the operation, and the use of the catheter is not only inconvenient to all parties, but almost certain to cause cystitis. During the after-treatment the vagina should be carefully syringed out about twice daily with a tepid three per cent. carbolic or other antiseptic lotion.

The sutures should be made to embrace an abundance of tissue—half an inch or more on each side of the line of rupture—otherwise they do not bring the parts together properly, and are likely to cut out. They should be removed on the seventh or eighth day, and not before. Want of attention to these points, as well as to antiseptic precautions and a lack of proper care and intelligence during the after-treatment, are the chief causes of failure in this, as in the secondary operation. In my opinion, atmospheric conditions have but little influence on the result.

In regard to the kind of suture used, I have had little experience with any but the ordinary interrupted suture, such as is generally used at present. I do not think that there is any particular advantage in the *serres fines* of Vidal, as recommended by Mann and Garrigues, even in slight cases; and the quill suture is both clumsy and untrustworthy, inasmuch as it does not go entirely around the wound.

Regarding materials for sutures, there are only three that I shall consider necessary to mention in connection with this operation. They are silver wire, silk, and catgut.

In operations for vesico-vaginal fistula and the like, it is often difficult, if not sometimes impossible, to tie a suture with the proper degree of tension in so confined a space. In such operations silver wire has no substitute worthy of mention. The degree of tension can be perfectly regulated by simply twisting or untwisting the wire, whereas, if silk or catgut be used, the knot when once tied has to remain so, or else a new suture must be introduced. It was for such cases that silver was originally intended by its great inventor, as every one knows, but in time it came into general use, as being more aseptic than silk and less liable to cut the tissues. This was undoubtedly true. With the present methods of rendering silk aseptic, however, I believe that for general use, as in perineal operations, it is equal in these respects to silver wire, besides possessing the additional advantage of giving the patient no inconvenience while *in situ*, does not interfere with cleansing the parts, and causes no pain

in removing it. Catgut had the objection to it of being too quickly absorbed. Kocher, of Berne, however, appears to have overcome this difficulty by placing it in oil of juniper for twenty-four hours, and then in alcohol (ninety-five per cent. strength) for preservation. At the time of immediate use it may be dipped in a five per cent. solution of carbolic acid. (Pilcher, "Treatment of Wounds," p. 112. New York: W. Wood & Co. 1883).

When the immediate operation has not been performed, or has failed, the secondary operation should not be deferred any longer than is necessary to get the patient in proper condition—two months or so from the date of delivery. For this purpose tonics should be given, if necessary, and the general health attended to.

31 West Thirty-third Street.
November 24, 1883.

ON THE USE OF PEPTONES IN DISEASE.

By J. W. FRANKL, M.D.,

of New York.

When the immortal Stokes requested that his epitaph should symbolize the lesson of his life in the memorable words, "He fed fevers," he pointed out clearly and unmistakably the direction that the therapeusis of the future should take.

Gradually our faith in specifics has been rudely shaken; slowly pathology has demonstrated that disease is, in many instances, self-limited, and must run a definite course. But while we may have lost that confiding faith in some of our remedies, this very fact has directed more decided attention to those conditions, in health and in disease, which tend toward the conservation of the vital forces.

The physiology of digestion has naturally received marked and distinguished attention, and although the process of digestion with all its inherent difficulties still, and probably always will present unexplained phenomena, the progress of the past score of years has added mightily to our former crude notions. From the simple idea that albuminous substances were all alike, their number has multiplied, each presenting attributes sufficiently marked to make them separately recognizable, and similarly, in contrast to the former opinion, that this one albumen when changed into albuminose, as it was formerly called, constituted the great assimilable albuminoid body, we now know many which, under the generic title of peptones, constitute quite a group of absorbable substances.

It is well established that the gastric, the pancreatic, and intestinal juices, each in succession from above downward, act upon the food (the function of the bile we will not here consider). Each in turn has an action which results in the conversion of albuminous compounds into different peptones—the latter juices giving rise to the simultaneous production of certain products of decomposition (skatol, indol, tyrosin, leucin, etc.). At one time it was thought that the peptones were themselves products of decomposition, but this view has been proven erroneous, and still further, it has fully been shown by Poehl, Henniger, and others, that they are easily reconvertible into albumen.

The convincing and excellent monograph of Dr. Poehl, of St. Petersburg (quoted in an editorial of The Medical Record of July 21, 1883, p. 72), helped to establish the fact that the peptonization of albumen is a hydration simply, and not a product of decomposition. Further, that peptone can be reconverted readily into albumen, and that chemical analysis reveals no characteristic difference between albumen and peptone, and that the optical properties of the two bodies are also entirely alike. This latter Poehl correctly thinks could not be true if the two bodies possessed any real chemical difference.

Acting upon the proposition that peptone is a modification, not a decomposition product of albumen, Plosz and Gyergyoi, some ten years ago, and subsequently Maly, Adam Kiewiez, and others, undertook a series of experiments upon animals, and later upon man, by substituting peptone for albumen in their food. Their anticipated results were fully realized by seeing the subjects of these experiments not only remain alive but very markedly gain in weight. It was these investigations which furnished the basis for the use of peptonized foods in practice. In Germany they soon established a place for themselves, later in England, and later still in the United States. But in this, as in all matters of progressive scientific thought, the great body of the profession fail to realize their importance. There has ever been an antagonism, though unspoken, between the demonstrable facts of the physiologist and pathologist and the application of remedies based upon these by the practising physician. Accustomed to the use of beef-teas and meat extracts, he clings to them with unwarrantable tenacity.

No one better understood the shortcomings of beef extracts as an article of nutrition than did Liebig himself. In *The Lancet* of November 11, 1865, he himself admits how much more preferable would be a preparation of meat containing its albuminous portion, instead of beef extracts, if only it could be brought within the means of our patients. The force of these remarks is still better appreciated when we consider, first, that the albuminous constituents of meat coagulate at a temperature far below the boiling-point of water, and that soups and broths therefore must necessarily contain but little albumen. They contain only the extractive matters—namely, the flavoring constituents, some of the organic and some of the inorganic salts, and a small percentage of gelatine. As nutritive substances these must manifestly be inadequate. Cold infusions of meat, especially with an addition of diluted muriatic acid, give better results as to the percentage of albumen, but even this does not contain, according to Voit,[1] more than 1.15 per cent. of albumen, so that six ounces do not contain more than half a drachm of albumen.

That such preparations have a value as stimulants, as tonics and appetizers in those suffering from debilitated stomachs, cannot be questioned. But the problem that we must still seek to solve is, cannot we maintain the general nutrition at a higher standard, and prevent the marked loss of tissue in prolonged febrile movements and in other conditions in which digestion is prevented? If the tissues require albumen in health, surely the same requisite exists in diseased states. But if the digestion is so at fault, as is the case, that the administration of ordinary albuminous food is out of the question, then is it not possible to peptonize the albumen as to make it sufficiently assimilable in these conditions? To peptonize by the use of pancreatic emulsions appears to us to permit the possibility and probability of inaugurating, coincidently with peptonization, some of the decomposition already spoken of which takes place in the intestine as one of the actions of pancreatic juice. Peptones, for this reason, seem eminently more desirable for this purpose. *Still further, is it not reversing the order of digestion to begin in the stomach with pancreatic digestion?*

Seeking to place my theoretical deductions upon the basis of practical application, I began the use of one of the preparations of peptonized beef, using for this purpose "Rudisch's" preparation of the "sarco"-peptones.

The careful analysis of Dr. Endemann, of this city, informed me that it contained over thirty-six per cent. of peptones. Further, it was not objectionable in its flavor. My experience has enabled me to collate the following facts, and I am much pleased to state that the results have in many instances exceeded my most sanguine expectations. First, as to the age at which sarco-peptones are admissible: I have used them for four weeks in an infant eighteen months old. Children bear them equally

[1] Herrmann: See Handbuch der Physiologie, vol. vi., part i., p. 448.

well with adults. Secondly, as to the diseases in which they have been used. Among many cases in which they have been faithfully tried, I refer to the following, not as specially selected, but simply as typical cases: In three cases of typhoid fever; in one the patient was fed exclusively on sarco-peptones for two weeks, and in two cases for six weeks; in two cases of chronic pneumonia, in both cases for four weeks; in one case of acute pneumonia, for eight days exclusively, milk being vomited; in one case of fracture in an aged person, for a week exclusively; in one case of icterus catarrhalis; in two cases of rheumatism, one complicated with Bright's disease, in one used exclusively for four weeks; in four cases of vomiting—one of pregnancy, one of anæmia after parturition, one of gastric catarrh after diphtheria, and one of cancer of the stomach, it was used with excellent results; in one case of pelvic peritonitis it was well borne; in one case of post-partum hemorrhage; also in a case of diabetes and gangrene.

The above cases sufficiently well illustrate, first, that the sarco-peptones are borne by the stomach when milk is not retained; secondly, that their nutritive value is beyond that of milk, judging from the better condition of my patients, and of beef broths; thirdly, from its readily assimilable form, even infants can be nourished by it, when milk is rejected. I have caused diligent inquiry to be made among my friends and acquaintances in the profession as to their success in the use of the sarco-peptones. The replies were uniform with my experience. I feel certain, however, that I cannot do more wisely than to quote from a letter from one whose dictum always receives the attention and marked consideration which, coming as it does from such eminent authority, it certainly deserves. Dr. A. Jacobi says: "I commenced the use of peptonized beef a very short time after Leube taught the preparation and indications of his 'meat solution.' For many years I employed it, both by mouth and by rectum; by mouth, either undiluted, by the teaspoonful or dessertspoonful, or diluted in beef broth, or with tomato sauce, etc.; in the rectum, diluted with warm water in different proportions. There are some facts which need not be proven, but which merely require application. Such a fact appears to me the great usefulness of a substance which has already been peptonized, *i. e.*, digested, over one whose claims on the functions of the stomach begin as soon as they enter the stomach. Thus, without going into specifications, I remember a few cases of cancer of the pylorus, in which the violent vomiting stopped entirely for some time, and immediately, when nothing but Leube's solution was introduced. These cases occurred even at a time when there was but a single place in New York City where the 'meat solution' was for sale, and when the preparation, in regard to uniformity and reliability, left much to be desired sometimes. This latter circumstance has often deterred me from using it when I might have derived great benefit from its use, but the sad fact will always remain, that the main necessities of the human species in regard to food and medicines are not also the main objects of the individual manufacturer and tradesman.

"I have also used it in cases of thorough hydræmia, slow convalescence, and all those conditions in which the stomach does not prepare its own solvent and digesting fluids. Wherever there is a mucous membrane and lymphatics, a genuine peptone ought to be, and is absorbed. Atrophy of the glands of the stomach, with its absolute apepsia, is one of the best indications for its use. A certain degree of gastric catarrh does not form a contra-indication, least of all, intestinal catarrh.

"Here I desire to direct your attention to the difference in the effects of peptones and 'beef-tea.' In cases of intestinal catarrh with diarrhœa, the latter—so frequently resorted to in general practice—is apt to be injurious by the concentration of salts in it, perhaps also for some other reason; peptone, however, is not only easily tolerated, but is beneficial, for the reason that it is absorbed before it reaches the diseased surface. On the condition of the latter when in contact with peptone or anything else everything depends. An inflamed mucous membrane does not absorb, and therefore to administer peptones in a serious form of gastritis, or to inject it into an inflamed rectum, is worse than letting them alone.

"I believe it took years after Professor Leube's publications before the manufacturing interest became aware that there was 'money' in the preparation of peptones. The meat solution has a very strong aromatic taste and flavor. It is true that some patients take it well and long, but some object to both those properties from the beginning, or get tired of the preparation very soon. These objections have been the reason for many attempts at producing other preparations of similar nature.

"I have no doubt there are a great many good and reliable ones among them, and the fickleness of the individual taste must often direct the selection of the required article by the physician. I, for my part, have for a long time preferred Rudisch's preparations, particularly his 'Sarco-Peptones.' I have been told that you have experimented a great deal with the same. My reason for preferring it has been, the absolute uniformity and equality of the specimens, and the fact that patients, as a rule, have been willing to take it for a long period in succession. I give it unmixed in teaspoonful or half-teaspoonful doses every half-hour, hour, or two hours, or dilute it with broth, or spread it on stale bread or toast, or mix it with water for rectal injections. For months I have used no other preparation, being satisfied with having at least one which was reliable. I do not mean to say that there are not just as good and palatable ones besides, but I am guided in my selection of that preparation simply by the fact that I have done well with it and cannot expect to do better. I have acted on the same principle which teaches me to demand in many of my prescriptions the drugs of Squibb, knowing that those articles are pure, uniform, and reliable, without meaning to say that his competitors could not furnish the required article just as pure, uniform, and reliable.

"Taking it for granted that you desired to hear from me neither reports of cases nor elaborate communications, I submit to you, dear doctor, the above remarks, brief and fragmentary though they may be, as the general result of my personal observations and experience.

"I know that many of my cases of hydræmia, slow convalescence, chronic disease of the stomach, many cases of gastric dyspepsia, inanition brought about by rachitis and scrofula, and infectious fevers, have been greatly benefited, to say the least, by peptone. Very respectfully yours, A. Jacobi."

CAN INSANITY BE PHILOSOPHICALLY DEFINED?

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Before proceeding to the specific discussion of the subject of this enquiry, let us first ask *what is a definition?* "The simplest and most correct notion of a definition is," according to John Stuart Mill, "*a proposition declaratory of the meaning of a word.*" And in concluding his chapter on "Definition," this able writer further says: "In giving a distinct connotation to the general name, the philosopher will endeavor to fix upon such attributes as, while they are common to all the things usually denoted by the name, are also of greatest importance in themselves, either directly, or from the number, the conspicuousness, or the interesting character, of the consequence to which they lead."

In order to select such attributes as are common to all the things denoted by a name, it is first necessary to have an accurate register of all such things.

Now, in reviewing the various definitions which have been proposed for insanity, there is evident one defect

common to them all: They include only such attributes as the formulator of the definition in question considered rightfully belonged to the "disorder." The result of all this has been that there is not to-day a single solitary definition of that which, by some, is considered *a* disease but which in reality is a *complex of psychical manifestations* traceable to a variety of causes, all of which, to be sure, *result* in interference with the normal functions of the brain. But not only have the definitions themselves been formed by those whose conceptions of mental impairment have been more or less subjective and narrow, but the criticisms of such definitions have been pronounced from a standpoint not one whit more objective. Thus we read that Mr. A. objects to the definition of insanity promulgated by Mr. B., because it would include the abnormal mental manifestations of "alcoholism," or those occurring as the result of cerebral hemorrhage. Or, again we learn that the definition of Mr. C. is incorrect because it would include the mental condition of a man who has received a blow upon the head with a club. And yet such cases are surely not instances of mental sanity!

There was a time when the term insanity—meaning an unsound mind—was applied to only such as exhibited the symptoms of raving mania; and the definitions of the day, if there were any, must have been in accordance with that conception. Since then the range of phenomena included in the term has progressively increased, notably of late years. Consequently the definitions appearing from time to time during the last hundred years have represented in the main connotations of the forms of mental derangement *known at the time*. Whenever, therefore, these *soi disant* experts were asked to give an opinion respecting the mental health of an individual, they calmly ransacked such "forms" of insanity as their often obtuse perspicuity had served to register; and even though there might be *bona fide* evidences of mental unsoundness, refused to recognize it unless the same were found to correspond with some previously recorded "form" of mental aberration.

Imagine this method of procedure applied to the investigation of bodily ailments. What should we think of the clinician who, finding an individual utterly prostrated by disease, should yet refuse to recognize him as ill, simply because he was unable to identify his sickness with any form of malady previously met with by himself, or recorded in the books of others!

But if all the *forms* of mental derangement are not yet described, how are we to enumerate their common attributes in one comprehensive definition? In order to answer this question a simple retrospective glance at the evolution of mental science is all that is necessary. If all the various forms of insanity which have ever been described are placed side by side, and if we seek for one paramount attribute which is characteristic of each and every one of them, it will be found to consist in this: That they are all psychic manifestations of direct or indirect impairment of brain-function. And if it is desired to be still more explicit we can say that: *Insanity is the psychic manifestation of impaired brain-function*, consequent upon causes resident in the brain, or upon extraneous causes acting upon it (the brain). This definition will be seen to include not only all "forms" of mental disease already recognized; but also those forms of mental impairment, which, owing to flagrant inconsistency, as I believe, are not generally recognized as insanity. Of this, however, more hereafter.

Beside the known forms of insanity, this definition also includes all forms that ever can be recognized, provided it be conceded that the brain is the seat of mind. It is evident that this definition includes the case of the man who has received a blow upon the head, causing confusion of ideas or unconsciousness. Moreover, it also includes the case of a man insensible from the effects of cerebral hemorrhage. But such persons are certainly sufferers from mental ill-health; they are not mentally sane, therefore they must be insane. An intermediate stage is philosophically unthinkable. Moreover, a term designed to connote morbid mental manifestations, should include more than one or several kinds of such manifestation. What, for example, would be thought of the clinician who should declare that a person with gastritis was unsound, whereas another suffering from pneumonia should be pronounced sound (or perchance neither well nor unwell!).

The pathology of corporeal disease is co-extensive with the limits of the entire body; the pathology of mind is as broad as the mind itself. Consequently any generic appellation designed to express bodily unsoundness should include within its scope *all* manifestations of bodily ill-health; consequently, also, any generic name designed to express mental unsoundness should include *all* manifestations of mental ill-health.

Scientifically, therefore, there is no "border line" between health and sickness; between mental sanity and mental insanity. An individual must be healthy or unhealthy; sane or insane. There is no "border land," except such a one as can be produced by an argument which, followed to its legitimate sequences, can only end in the most comple *reductio ad absurdam*. A subject cannot sit astride of the "border line," with one leg dangling in sanity and the other in insanity.

If, however, alienists, both practical and theoretical, still persist in calling certain groups of morbid mental phenomena insanity, and with equal persistency denominate other equally morbid phenomena *not insanity* (nor sanity!), how can a philosophical definition of mental impairment—of insanity—ever be anticipated?

The time has surely arrived to discard such absurd inconsistency, whether the same be the outgrowth of medico-legal, professional, or popular short-sightedness.

Legislation must indeed decide, even where the definition of insanity is strictly scientific, as to the degree of mental illness which renders an individual irresponsible *before the law*. But it does that now, in spite of the many clumsy and purely subjective efforts to designate *only certain* groups of mental disorder as insanity.

Things certainly cannot be worse than they are at present, and a broader and more scientific conception and definition of insanity is certainly a consummation "most devoutly to be wished."

THE THERAPEUTICS OF TYPHOID FEVER.

By VARIOUS AUTHORITIES.

TEMPERATURE.

AUSTIN FLINT.—1. By the employment of cold water externally in cases of typhoid fever, the temperature of the body may, after a variable time of the continuance of the employment, be reduced to 102° or lower.

2. After a period varying very much in different cases, and, also, at different times in the same case, the temperature, as a rule, again rises as high as, or higher than, before the reduction.

3. Repeating the employment of cold as often as the axillary temperature exceeds 103°, the number of repetitions required in different cases is extremely variable.

4. The sponge-bath and the wet sheet with sprinkling may be employed to the exclusion of the bath-tub in the antipyretic treatment in cases of typhoid fever, as well as of other febrile diseases.

5. These modes of employing cold water may be continued sufficiently long for the reduction of temperature to 101° or lower, and repeated as often as may be required, without risk of any immediate injury, and the study of these cases furnishes no ground for supposing that a liability to complications or accidents is thereby increased.

6. Reductions of temperature by these modes as often as it rises, in the axilla, above 103°, improves the condition of the patient. The cases he has studied do not

afford proof either that the fatality of typhoid fever or that its duration is thereby diminished. The study of these cases, however, renders it impossible that this proof would be afforded by a larger collection of cases.

7. The results of the analysis of these cases, although not sustaining the statements of Liebermeister and others respecting the controlling influence of the employment of cold externally in cases of typhoid fever, yet not only show this method of antipyretic treatment to be safe, but afford encouragement to employ it with the expectation of diminishing the severity of the disease and its danger to life.

ALFRED STILLÉ.—It was formerly the practice—for years at least—to bleed and purge; but the exhaustion produced more than outweighed the advantage of the reduction of temperature. Experience has shown that mild diaphoretics, such as effervescing and neutral mixtures, sweet spirit of nitre, aromatic spirit of ammonia, and muriatic acid, are preferable to active cathartics. Another mode of treating the fever now fashionable is by cold water. This method has been adopted on the supposition that temperature is the sole evil. The method consists in immersing the body in water (68° F.) for five to fifteen minutes (according to the age and strength of patient), then wrapping him in dry blankets and giving a glass of wine. He is allowed to remain in the blankets some time. The bath is to be repeated when the temperature rises, say to 102°. In active cases in adults the baths are repeated at intervals of two hours. Persistent repetition is the essential part of the treatment. Cases are recorded in which two hundred such baths have been given. Ordinary cases require thirty or forty. It is claimed that all the typhoid symptoms are abated and the mortality reduced. If this were so, the method would become popular; but the fact remains that baths are not now favored outside of Germany, and by no means generally there. The high temperature is considered the evil, while in reality it is only a symptom of the disease, and never rises so high as, of itself, to necessitate active cold baths. The value of cold baths lies not in the reduction of temperature, but in the diaphoresis which they produce, eliminating the poison. The cold bath, with quinia and digitalis, has been said to reduce the mortality from twenty-seven per cent. to eighty per cent. But this boasted result shows only the advantage of this treatment over the old heroic treatment of venesection and purgation. It makes but a poor showing beside the result of the supporting treatment with no drugs whatever, the mortality of which in London, Paris, and this country is less than five per cent. The treatment by cold water, quinia, and digitalis has been abandoned in the Vienna hospitals, where its mortality was nineteen per cent. to twenty-five per cent. Liebermeister announced that by it the proportion of relapses and the mortality are increased. Others attribute to cold water the increase of hemorrhage, neuralgia, and pain in the limbs. But Liebermeister now admits that the nervous and all other symptoms are relieved, and ulcers prevented, by cold water. The treatment by cold water is probably of value when employed persistently. The method of using quinia is to give fifteen to forty-five grains in the evening, and its effect then is to reduce the temperature and keep it down for twenty-four to forty-eight hours. It is to be repeated when the fever rises. It will be seen that the direct antipyretic effect of quinia is greater than that of cold water. Binz holds the *theory* that quinia reduces temperature by weakening the power of the zymotic poison. He does not deny that quinia may kill by paralyzing the heart. Peacock, of London, and Niemeyer have both given up the use of large doses of quinia. Quinia in large doses is unnecessary, useless, and often dangerous. Sodium salicylate reduces temperature, but does not improve the typhoid state.

WILLIAM PEPPER.—Temperature is to be kept down by preventive measures rather than by the cold bath, which is regarded as a *dernier ressort*. When temperature runs up in spite of drugs, the whole body is sponged every two hours—the sponges being squeezed out of a mixture of water and bay rum at a temperature of from 60° to 80°. If the patient's temperature still runs up he is wrapped in sheets wrung out of cold water. The only case in which the cold bath is used is in the first ten days, where the temperature rises above 103° and is not to be controlled by milder measures.

ALONZO CLARK.—*When the temperature of the body* runs very high, quinia is given in decided doses, or cold water is employed. In young persons the cold bath is the most convenient and efficient means of reducing temperature. The temperature of the bath used is just 10° below the temperature of the patient's body. The patient is allowed to remain in the bath for twenty minutes. If the temperature rises again, another bath is given.

ALFRED L. LOOMIS does not believe in the efficacy of cold baths or of large doses of quinia in arresting the development of typhoid fever. He maintains the temperature of the room in which the patient lies below 60° F. Frequent sponging of the body with cold water has been of service in his hands. As soon as the axillary temperature in the evening rises above 103° F. he places his patients in a bath of a temperature of from 70° to 80° F., and then gradually lowers that temperature until the patient's temperature begins to fall. When the patient's temperature reaches 103° he is to be taken out and put to bed. When his patients are too weak to be put in the bath he employs the wet pack. He regards cold baths as contraindicated by feebleness of the heart's action.

As an antipyretic he gives gr. xxx. of quinia in one dose, or gr. x. every half hour until gr. xxx. or xl. have been administered. He is in the habit of administering an antipyretic dose of quinia when the temperature has been reduced by the baths.

BELLEVUE HOSPITAL.—The treatment at present in vogue is that of quinine and baths. This was begun four or five years ago, and has received such favor that it is quite the routine now. The quinine is given differently. Perhaps the most popular way has been ten grains two or three times a day, the evening dose being doubled if the temperature rises above a particular height, say 105°. It sometimes causes gastric irritation, being given in powder form. If it is vomited pills are tried, and finally double doses by rectum. Quinidia was used for a short time, and it reduced temperature like quinine, but irritated the stomach more. Baths in every shape are used, but the sponge-bath is the form most adopted. The patient's temperature is taken; if found above a certain height, he is stripped either entirely naked or perhaps only the upper half of the body. He is then sponged over with water at a temperature of from 60° to 80°. If only half the body is uncovered at a time, that part is allowed to dry, and it is then covered, and the rest of the surface sponged. This process is kept up for fifteen minutes. If that is insufficient to reduce the temperature, it is prolonged to half an hour. It is repeated every one, two, or three hours, according to the result obtained. At the end of the bath a little whiskey is generally given.

The effect of the quinine on the temperature is to reduce it slightly in a considerable number of cases. Its effect on the patient is to produce nausea and vomiting in a small number of cases.

The sponge-baths are almost always pleasant to the patient, if not too frequently repeated. If given every hour, or two hours even, they seem to weary and annoy him. They certainly reduce the temperature in most of the cases. In a small number of these the reduction seems to last for many hours. Sometimes two or three baths given in the afternoon and evening reduce the fever two or three degrees, and it keeps down for twelve hours. But it is not very rare that the baths are given every hour even, without producing very marked effect. The

sponge-bath is a much more efficient antipyretic than quinine. The wet pack is hardly used now. In one case where it was employed pneumonia complicated the disease. The plan of placing the patient in water at a temperature of 98°, and then gradually lowering it, has been tried a number of times, and so far no deaths can be traced to it. But these gradually cooled baths are uniformly annoying and depressing to the patients. They don't like them. Neither have they been proved to reduce temperature permanently any better than the sponge-baths do.

Several cases have been treated upon the Kibbee bed. Its action and effectiveness were similar to immersion in the bath-tub. It did not eliminate the fever from the disease.

The results of the treatment of typhoid fever patients at Bellevue Hospital within the past ten years have shown that large doses of quinia and that the antipyretic treatment by cold baths are unnecessary, and that the employment of mineral acids and of symptomatic remedies is sufficient.

STIMULANTS.

ALFRED STILLÉ.—When the skin is dusky, tongue dry and dark, and patient delirious, use superficial blisters to back of neck, sinapisms on the limbs and over the heart, mustard foot-baths, friction of chest and limbs with stimulating lotions containing turpentine or ammonia. Coffee is better than alcohol. Wine-whey, eggs, egg-nog. Beef essence. Cracker soup. Arrowroot. Alcoholics are not so early or so long needed nor in such quantities as in typhus. Hold alcohol in reserve for use when all else fails. Comparatively few cases require it. Oil of turpentine acts as a cardiac, vascular, and nervous stimulant, and is to be given when there is tympanites. It probably acts also locally on the ulcers. Give five to fifteen drops in emulsion or capsules every three or four hours. It accompanies the blood to all parts of the system and stimulates the capillaries to expel their stagnant contents; it also stimulates the respiratory mucous membrane, causing expulsion of mucus. With the exception of this last action, alcohol answers the same purpose as a stimulant. Hence, in mere prostration, give alcohol; if lung symptoms require treatment, prefer oil of turpentine.

ALFRED L. LOOMIS lays down the following rules with regard to the use of stimulants:

1. They are never to be administered indiscriminately —that is, they are never to be given simply because a patient has typhoid fever.

2. When there is a reasonable doubt as to the propriety of giving or withholding stimulants, it is safer to withhold them, at least until the signs which indicate their use become more marked.

3. In giving stimulants the effects of the first few doses are to be very carefully watched.

4. Stimulants are contraindicated by dry tongue, restlessness, increasing delirium, pulse, and temperature.

BELLEVUE HOSPITAL.—In the latter weeks of the disease in all cases, and during its whole course in many asthenic patients, an important indication is to sustain the heart-power. This is done by a free use of alcohol, whiskey being the form most used at present. The quantity is determined by the needs of the case, but where there is necessity it is not spared, one case being allowed twenty ounces daily for three days with good result. Some use ammonia as well as whiskey, but its action is considered less certain. When it is used the liq. ammon. acet. and the spts. ammon. aromat. are combined. Other symptoms are met by appropriate measures as they arise.

WILLIAM PEPPER.—Stimulants are not administered to patients under the age of puberty, as a general thing. They are only thought to be demanded by some one or more of the following indications, viz.: (1.) Ataxic nervous disturbances. (2.) Profound asthenia. (3.) Circulatory disturbances. (4.) Dry and brown tongue with sordes. The milder forms of stimulus, such as wine-whey, are always used at first. When demanded, whiskey is given with lime-water—the latter being added to prevent coagulation—in the proportion of f ℥ ss. each of whiskey and lime-water to every f ℥ iij. of milk.

ALONZO CLARK.—Two-thirds of his patients have been found to do better without stimulants than with them. A good general rule is the following: *When alcoholics diminish the frequency and increase the force of the pulse, they do good.* In such cases they are given in a quantity sufficient to increase the force of the pulse, and to diminish the restlessness and suffering of the patient.

NERVOUS SYMPTOMS.

ALFRED LOOMIS.—*Headache.*—Warm fomentations are applied to the forehead. Among the anodynes the best for the treatment of this symptom are the bromides and chloral.

Delirium is generally relieved by chloral and opium. In some cases the best results follow the use of stimulants.

ALFRED STILLÉ.—There are two modes of expression of nervous symptoms—the ataxic and the adynamic. The ataxic condition lasts all through the course and denotes an active struggle. Delirium and subsultus belong to the ataxic. They are less dangerous than coma and exhaustion, which belong to the adynamic, and indicate that the typhoid poison has overcome nature. In dynamic the capillaries alternately contract, excluding the poison, and dilate, admitting it; while in adynamic they are continually dilated, admitting it. When the symptoms are ataxic, relieve them by superficial blisters to the nape of the neck, warm pediluvia, cold to the head, and heart stimulants. Give two grains of quinia every two hours as a stimulant. Wine of opium, the equivalent of one grain, as a stimulant to the system, and as adynamia comes on, supplement these by alcohol as a heart stimulant. Do not be over-hasty in giving quinia and alcohol.

ALONZO CLARK.—*Cough*, when it is the result of a catarrh, is treated either by the comp. tr. of benzoin, in ten-drop doses every three or four hours, or by means of the following combination:

℞. Mist. guaici ..... f ℥ j.–f ℥ ss.
Tr. balsam. tolu ..... gtt. vj.–x.
M. Sig.—Every two to four hours.

Occasionally, good has been accomplished by the inhalation of the vapor of warm water for an hour or two every day.

Restlessness is soothed by sponging the surface of the body with warm or cold water. In some cases a Dover's powder is required.

DA COSTA gives a one-grain suppository of opium three times a day. It quiets the bowels if there is any tendency to diarrhœa, and has a good influence over the disturbed action of the nerves. When the opium does not act speedily by the bowels, he gives one-sixth of a grain hypodermically. He finds a combination of digitalis and opium a good one—best suited to cases where there is also rapidity of the heart's action. To calm the nervous system the bromides are given in twenty-grain doses. When this fails, fifteen-grain doses of alcohol usually are effective. In these cases cold applications to the head are also indicated. Putting the patient into a warm bath will generally be found to relieve the delirium and wakefulness and produce sleep.

DIET AND HYGIENE.

ALONZO CLARK, regarding *diet*, believes in the steady and persevering administration of such food as can be absorbed by the stomach. Milk, beef-tea, raw eggs beaten up with water and made of such consistency that they can be eaten with a spoon, and expressed beef-juice, are all of value. Where one disagrees, another is

substituted. The expressed juice of beef is obtained by cooking a piece of steak so as just to crust the surfaces, and then squeezing out the juice with a lemon-squeezer. As the disease advances, the food administered is more and more sustaining. When the stomach fails to retain food, nutritious enemata are employed.

He considers plenty of *fresh air* as of prime importance to typhoid fever patients. He always insists that a window on the side of the room opposite the patient be dropped a certain distance from the top, even in the winter season, and that the patient be protected from the draft by the use of a screen.

The alvine discharges are always disinfected at once. The way in which this is done is by placing in the bed-pan or vessel a half pint or a pint of a solution of the sulphate of iron, just before it is to be used.

The bed-clothes, as soon as they are soiled, are removed from the bed and plunged into a tub of water, which is sufficiently impregnated with carbolic acid to secure effectual disinfection.

WILLIAM PEPPER.—Milk is regarded as the best diet during the stage of catarrhal inflammation. The milk is diluted with lime-water if the curd appears in the stools. Two pints of milk and lime-water, mixed, are given in the course of the twenty-four hours.

BELLEVUE HOSPITAL.—For the nourishment of patients milk is used exclusively, and as much is allowed as the patient can take. Usually a full glass of milk is taken every hour, lime-water being added in the few cases where the milk alone seems to disagree. The proposal of Sir Wm. Jenner to substitute beef-tea for milk does not find much favor in hospital practice, but among private patients where beef-tea can be properly prepared it is often employed. The demand is now so great that two of the New York restaurants prepare it daily for the use of the sick, and are able to dispose of large quantities.

ALFRED L. LOOMIS.—As diet he allows at first only milk diluted with lime-water, and later cream and the yolk of eggs in milk.

During convalescence he regulates the patient's diet with the utmost care, allowing no indigestible article of food.

GASTRIC AND INTESTINAL SYMPTOMS.

ALFRED STILLÉ.—*For flatus.*—Flatus may mechanically interfere with respiration and so with aëration of the blood. It may also interfere with digestion. Flatus is chiefly in the colon. It is not a secretion. Neither is it caused by increased decomposition of food, for but little food may be in the intestine. It is caused by the expansion of the gas on removal of the normal pressure caused by the tonicity of the muscular coat of the intestines, they in common with all other muscles being weakened. Mineral acids—muriatic, phosphoric, aromatic, sulphuric—every four hours. When the typhoid state is accompanied by a dry skin and a high temperature, sponge with cool or tepid water (this has no connection with the cold-water treatment). If the skin is wet with sweat, keep well dried and wrap in warm blankets.

For tympanites.—Endeavor to stimulate the intestines by oil of turpentine externally. Paint the abdomen with oil of turpentine, and apply to it a flannel cloth wrung out of hot water. Give enemata containing oil of turpentine. Put a teaspoonful of oil of turpentine into an emulsion and inject repeatedly. In nine cases out of ten enemata do not pass the sigmoid flexure. The action is by absorption and through the blood. Enemata or suppositories of assafœtida may be given. Use frictions with lotions. If turpentine fails, and the patient is suffering from flatus, do not fail to use the ice-bladder. When pain exists from other causes than flatus, use warm fomentations.

For intestinal hemorrhage.—Place the patient on his back, with his head raised and his knees drawn up. Apply the ice-poultice, chiefly to the iliac region, where the hemorrhage probably originates. Give internally lead acetate, copper sulphate, tannic or gallic acid, or, which is probably the best, gallic acid with lead acetate. Ergot by the mouth or hypodermically.

For pain, give morphia or opium.

For perforation.—Absolute rest and opium (one grain) or morphia (½ grain hypodermically) hourly till the patient is tranquil. Give turpentine internally. Give no food for twenty-four hours. Give a little ice-water.

ALONZO CLARK.—*Hemorrhage from the bowels* is controlled, if possible, by absolute rest and doses of the fluid extract of ergot.

In perforation of the bowels, the patient is placed thoroughly under the influence of opium.

Tympanites.—Cold compresses are applied to the abdomen, and covered with oiled silk. Where this fails a stimulating injection is given, consisting of one-half pint of a solution composed of Labarraque's solution, 1 part, and water 16 parts. In other cases, from 8 to 10 drops of the spirits of turpentine are given in mucilage.

Diarrhœa he manages by the following:

℞. Bismuth subnit. ..... 3 j.
Morphiæ sulph. ..... gr. j.
M. Et. in chart No. xii. div. Sig. One to four a day.

Other astringents which he has found to be of service are tr. kino, tr. catechu, and decoction of blackberry root.

PEPPER regards the specific follicular catarrh of the intestines as of great importance in the determination of the treatment. He holds that there are a number of remedies which exert a powerful influence upon this catarrh. The first of these is the nitrate of silver, which reduces the size of the enlarged follicles, relieves the inflammatory engorgement, and allays the hyperæsthesia of the nerves. So too do carbolic acid and the subnitrate of bismuth. He prefers the nitrate of silver, and only substitutes carbolic acid in its place when some putrid element is present. The nitrate of silver is given in quarter-grain doses four times daily. Opium in pill form is combined with the silver when the diarrhœa is excessive. From one-quarter of a grain all the way up to one grain of opium is given three or four times daily. If the bowels are constipated, belladonna is substituted in the place of opium.

BARTHOLOW, for diarrhœa, recommends tr. iodine, gtt. v., well diluted with water, in the treatment of typhoid fever. Under this—one of the German (so-called specific) plans of treatment—he says, "with proper diet and nursing, the mortality is much diminished." The same writer, for the diarrhœa of that disease, prefers the following:

Liq. pot. arsen. ..... gtt. ij.
Tr. opii. ..... gr. iv.
Repeat as often as required.

ALFRED L. LOOMIS.—*Diarrhœa* as occurring early in the course of the disease, he allows to go untreated. When it comes on in the third or fourth week he controls it by means of opium.

Tympanites he relieves by the application of turpentine stupes to the abdomen.

Hemorrhage is treated by absolute rest, opium internally, and ice-bags applied over the abdomen.

DACOSTA.—*Intestinal hemorrhage in typhoid fever.*—Ergot by the mouth with hypodermic injections of whiskey, with a little ammonia, constitute Dr. DaCosta's main reliance. The dose of ergot is 20 minims every three hours. The injection is composed of from 3 to 5 drops of aqua ammonia with 30 minims of whiskey.

LARYNGEAL AND PULMONARY SYMPTOMS.

ALFRED L. LOOMIS.—*Bronchitis* he has found amenable to dry cupping and the internal administration of the carbonate of ammonium.

Laryngitis.—A small blister is applied on either side

of the angle of the jaw, and the whole neck enveloped in a poultice.

ALFRED STILLÉ.—*For bronchial trouble* use expectorants, stimulants, as ammonium carbonate. Be careful not to disorder the stomach by cough-mixture. Probably the best method of medication is by inhalation. Use in this way oil of turpentine, balsams, ammonium carbonate of chloride, and carbolic acid. *In gangrene of the lung* use free inhalations of carbolic acid; give quinia in tonic and alcohol in stimulant doses. *The food* throughout typhoid fever should be unirritating. Avoid all solids as long as possible, even after convalescence. When you commence to give solids, give pepsin immediately afterward, for the stomach is not used to supply sufficient gastric juice, and must be assisted. Avoid all muscular efforts.

DACOSTA.—For *pneumonia*, turpentine internally, with morphia enough to keep the turpentine from irritating the bowels and bladder. His local treatment of the chest consists in the use of dry cups and turpentine stupes. Twelve grains of quinia are given daily. Dr. DaCosta is a strong believer in the value of turpentine in the pulmonary complications of typhoid fever. In the vast majority of such cases stimulus is needed, about eight ounces of whisky and four ounces of wine being given in the twenty-four hours.

For *parotitis* ice is steadily applied to the swollen gland. If suppuration takes place in spite of the ice, poultices are at once applied, and the pus released by an early incision. Dr. DaCosta's internal treatment consists in gtt. xx. of the tincture of the chloride of iron every three hours, and gr. xij. of quinia, and f℥ iv. of whiskey daily.

GENERAL POINTS.

ALFRED STILLÉ.—Typhoid fever must and will run its course under any treatment. No treatment can abridge it; but bad treatment may prolong it, or convert a favorable case into a fatal one. Many cases need no active treatment. Mild ones need only quiet, rest, ventilation, and good nursing. Support the system. Diluent drinks, soups, farinaceous food. In more severe cases several elements require treatment. First, the *diarrhœa* requires attention. Some say to cautiously encourage it, regarding it as nature's effort to throw off the poison. It is highly probable that mild purgatives in the first stage are often advantageous. My impression is very decided that this practice has both reason and experience to support it. First, use calomel, and then mild salines or oil. Use no laxatives at all after the first week. When there is constipation, use enemata. Do not use them unless the indication is evident. If an accumulation occur, remember that the colon and rectum are healthy. For excessive diarrhœa, use chalk mixture, bismuth grains xx. to coat the intestinal ulcers, catechu, logwood, kino, rhatany, blackberry root. Lead acetate and silver nitrate are less safe. Astringent enemata may be given, containing small portions of opium.

For debility in the latter stage, from nervous strain, intestinal lesions and diarrhœa, cinchona and its preparations are at the head as tonics. This debility may follow any severe disease, but is greatest in typhoid fever. It is not the typhoid state, but usually follows it, but may coexist with it. Stimulants, too, must be judiciously employed until food can be assimilated. They are required when the pulse is feeble, skin cold, features sunken, and patient muttering, listless, and weak.

ALONZO CLARK is in the habit of administering some mineral acid in all cases of typhoid fever—hydrochloric is that generally employed—but does not think much of the German treatment by iodine or calomel.

Bed-sores.—Nothing has been found so effectual for their prevention and treatment as a water-bed. Where this cannot be obtained, the best substitute is the padded ring, or a rubber ring filled with air.

ALFRED L. LOOMIS.—*Bed-sores* are prevented by frequently bathing the parts with camphor. If the sores penetrate the integument they are washed with a weak solution of carbolic acid and afterward covered with lint smeared over with vaseline.

WILLIAM PEPPER.—The poisoned state of the blood is controlled by means of quinia and salicylic acid. The latter has been found to be very valuable in this condition as a disinfectant. Quinia is given to the amount of not more than twelve grains in twenty-four hours.

Relapses are treated as first attacks. Hemorrhage is managed by absolute rest in bed for twenty-four hours, and by the administration of opium to produce absolute rest for the alimentary canal. Acetate of lead is sometimes combined with the opium in the shape of suppositories. Ergot is also very useful. The food allowed is small in quantity, and liquid.

DR. COHEN finds that large doses of quinia rather increase the diarrhœa and headache. His patients are sponged with vinegar and water, and abundant ice is given them to suck. Oil of turpentine in ·20 gtt. doses every hour or two, in mucilage, he has found to act most beneficially. Morphia is given hypodermically in half-grain doses where the delirium is active.

DR. WILLIAM H. BENNETT reduces the temperature and strengthens the heart by 10 gtt. doses of digitalis thrice daily.

DR. LOUIS STARR controls diarrhœa by starch and laudanum enemata.

TYPHOID FEVER IN CHILDREN.

DR. A. JACOBI considers typhoid fever in childhood as a very manageable disease, if taken in time.

High temperature he reduces by means of the cold bath, and if reaction is not at once established he plunges the child into a hot bath, which has the effect of restoring the circulation on the surface of the body and thus enabling the blood to throw off a part of its heat. Where the child will not bear a cold bath, he bathes the surface of the body with cold water as far down as the thighs.

He regards *cold packing* of the trunk and abdomen as of great service. The child is retained in the pack until both pack and surface become slightly warm.

When the temperature is high he gives quinia—from eight to fifteen grains daily in one or two doses. If the temperature is very high, from twelve to sixteen grains are given at a dose. He always administers it in solution, and in the form of the muriate or neutral tannate.

He does not hesitate to recommend salicylic acid and salicylate of sodium in the reduction of high temperatures. He gives salicylate of sodium to a child in doses of three to six grains, three, four, or five times in the course of twenty-four hours. He has sometimes succeeded in reducing temperature by a combination of quinia and salicylic acid where both remedies failed to do so when employed separately.

Now and then he uses digitalis, in small doses, to invigorate the heart's action. Veratrum viride he does not recommend, by reason of its occasional irritant effects upon the mucous membrane of the stomach and intestines.

He believes stimulants to be especially indicated, and gives a baby one year of age an ounce of brandy or whiskey in the course of twenty-four hours. He always gives them in milk, water, or barley-water, and never alone.

Camphor he regards as an excellent stimulant, and gives from two to ten grains of camphor, in the course of a day, to a child from two to four years of age. Musk, also, he regards as a valuable stimulant. The dose for a child two years of age, is two grains, to be repeated every hour. With it he has obtained admirable results when nothing else seemed to be of any avail whatsoever. When a speedy effect is desired, he does not rely alone upon the internal use of stimulants, but proceeds at once to inject, hypodermically, ether, brandy, alcohol, or camphor dissolved in ether, oil, or brandy. He is very

careful that the solution of camphor thus obtained is not too strong, in which case the menstruum is absorbed very rapidly and the camphor is left remaining in the subcutaneous tissue.

Hemorrhage from the bowels Dr. Jacobi treats by opium and alum. In some cases he has had excellent results from the steady application of an ice-bag over the ileo-cæcal valve.

Progress of Medical Science.

MASTOPHOBIA.—Dr. Luis Suñé y Molist relates the following case in the *Revista de Ciencias Médicas* for September 25, 1883: A child, apparently healthy and of healthy parentage, was put out to nurse, and for a time seemed to thrive; but after about a week it was taken with colic, and in order to quiet it, the parents made a little bag filled with a sort of sweet biscuit and put it in its mouth. This would quiet the child and induce sleep. In a short time it began to manifest an aversion to the breast, and would refuse to nurse, although it was hungry and would take milk with avidity when fed with a spoon. There was nothing abnormal about the nipples, nor was there any stomatitis on the part of the child. Various nurses, with variously shaped nipples, were tried, but all to no purpose, for the child absolutely refused to nurse. Recourse was finally had to bottle-feeding, but the child died at the expiration of two weeks, of entero-colitis. The writer stated that he could find no explanation of this mastophobia either in labial hyperæsthesia, paralysis of the muscles concerned in suction, anorexia, change in the quality of the milk, or deformity of the nipples. He thought that the repugnance to nursing was a sort of monomania induced in the first instance by the too frequent exhibition of the *muñecas*, or sugar-teats.

THE WARM BATH AS AN AID TO PHYSICAL EXAMINATION OF THE ABDOMEN.—In cases in which an obstacle to palpation of the abdomen is offered by the hard and tense condition of its parietes and by the contractions caused by the contact of the hand, Dr. Mai places the patient in a warm bath. In a few minutes the abdominal walls become relaxed, and the examination is conducted with ease.—*Rivista Clinica*, September, 1883.

CONGENITAL TUBERCULOSIS.—Dr. Berti relates two instances in which he found advanced caseous processes in very young infants (*Rivista Clinica*, September, 1883). The first case was that of a child born before term and living nine days. It belonged to a phthisical family. At the necropsy two cavities were found in the lower lobe of the right lung; there was caseation of the bronchial and mesenteric glands, and the pleura was infiltrated with round cells. The second case was of a child born by the breech. There was very extensive gangrene of the presenting part, and a large abscess formed in the right sacro-gluteal region. The infant failed gradually, and died after twenty-six days. The autopsy revealed tubercular peritonitis and enlarged and partially caseous mesenteric and mediastinal glands.

REMOVAL OF IMPACTED CERUMEN FROM THE AUDITORY CANAL.—In cases in which a plug of cerumen cannot readily be dislodged by syringing, Dr. Baratoux advises the employment of one of the following means: 1. Pour a spoonful of warm water into the meatus twice a day, retaining it there for about fifteen minutes. 2. Drop a little warm oil or glycerine into the ear; or, 3. Put fifteen drops of a warmed solution of bicarbonate of soda (six grains to a drachm each of water and glycerine) into the ear twice a day. In this way the plug is softened and is easily removed by the syringe. The pavilion of the ear should be held upward and backward, and the nozzle of the syringe passed along the upper wall of the auditory canal.—*Lyon Médical*, No. 31, 1883.

THE TENDON REFLEXES IN TYPHOID FEVER.—An exaggeration of the tendon reflexes in patients ill with typhoid fever has been noted by Strümpell and Ballet. Dr. Pluyand, in a recent brochure on this subject, cites a number of cases in which he found an exaggerated excito-motor power present in the spinal cord. As a rule, the disorder was manifested in the tendon reflexes. But in some this condition was slight or was masked by some other phenomenon (epileptoid movements or contractures). In still others the excitability of the cord found expression in a chorea appearing with the typhoid fever and ceasing with it. There are cases, however, in which the tendon reflexes seem to be diminished. M. Petit-Clerc, in a thesis published in 1880, even regarded this as the ordinary condition in typhoid. Notwithstanding these divergences, more apparent than real, as they are due often to the methods employed in the study of the reflexes, M. Pluyand thinks it undeniable that there is a condition of increased excitability in the cord in the greater number of cases of typhoid fever. Of 100 cases, the tendon reflex was exaggerated in 58, moderate in 25, and diminished in 17 cases.—*Le Progrès Médical*, September 1, 1883.

MEDICATED TRACHEAL INJECTIONS.—At the recent session of the Association Française pour l'Avancement des Sciences, held in Rouen, Dr. Bergeron presented a memoir on the subject of the injection of medicated substances into the trachea (*Lyon Médical*, October 7, 1883.) The injection of medicated liquids into the respiratory passages below the larynx is, he asserted, very well borne by cows, horses, and dogs, and determines very slight functional trouble. It is possible to inject in this way, in man, a solution of citrate of morphia, if the needle be protected during its introduction by a trochar, so that the canula shall not become plugged up in traversing the tissues. The little operation should be practised while the patient is lying down, so as to avoid syncope. M. Bergeron has, under these precautions, made twenty-five injections in thirty-five days, with calming effect, in a patient suffering from pulmonary phthisis.

THE USE OF SULPHATE OF STRYCHNIA IN LABOR.—Dr. Emile Déghilage employs strychnine instead of ergot in dystocia due to uterine inertia. He considers that it is more efficacious in these cases than ergot. Granules are employed containing each about $\frac{1}{100}$ grain, one of which is given every ten minutes.—*Lyon Médical*, October 7, 1883.

NON-SPECIFIC VAGINITIS IN OLD WOMEN.—A form of vaginitis, occurring in women advanced in years and free from any suspicion of sexual relationships, is described by Dr. Després (*Centralblatt für Gynäkologie*, September 29, 1883.) It is dependent upon an incomplete incontinence of urine. The muscular walls of the bladder being atonic the organ is never completely emptied, and the residual urine excites a vesical catarrh. This leads to incontinence, and during sleep, particularly when the patient lies on her back, the urine trickles down into the vagina. There its presence sets up an inflammatory process, the more readily as the urine itself in these cases always contains a large quantity of pathological products.

PRIMARY ACUTE OR SUBACUTE SYNOVITIS OF THE TENDONS OF THE HAND.—Dr. Riedell calls attention to a hitherto apparently unobserved affection of the sheaths of the tendons in the hand, which he had seen several times, but whose true nature he recognized only after opening the sheaths. There is a painful inflammation in the neighborhood of the metacarpo-phalangeal articulation, speedily followed by a complete stiffness of the finger as far as the terminal phalanx. It never proceeds to suppuration. Dr. Riedel ascertained by an incision that the trouble lay in every case in a swelling of the vincula tendinum, or in a fibrinous exudation into the sheath of the tendon.—*Deutsche Medicinische Wochenschrift*, No. 34, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 1, 1883.

BICHAT AND THE DOCTRINE OF VITAL PROPERTIES OF THE TISSUES.

THE problem of the nature and cause of life still defies solution, although the conditions of vital phenomena are well known. Men have endeavored to throw light on the question by certain hypotheses, and these hypotheses have deeply affected the theory and practice of medicine. In fact, at the present day, one large and influential school of medicine finds justification for its name and its practice by an appeal to the supposed reciprocal relations between certain dynamical agents (attenuated medicaments) and the hypothetical vital force under conditions of derangement.[1] Stahl, who was born about the middle of the seventeenth century, may be regarded as the founder of the iatro-spiritualist system. The anima, according to Stahl, is a power that opposes the tendency of the material organized compounds to putrefaction. It is the *vita* which, during its active administration, successfully resists the chemical and physical forces which would otherwise pull the organism to pieces. It is the *phusis* of Hippocrates, and the *archæus* of Van Helmont. The anima, by negligence or want of knowledge, may originate disease. When disease exists the anima is the agency by which health is restored. The whole art of therapeutics then must consist in an endeavor to repress the anima when outrageous and arouse its powers when languid, and to assist the efforts of this principle to bring about restorative and evacuant crises. It must be admitted that the system of Stahl was barren of progressive results. It was the old notion of the essential passivity of matter which only acts as an outside hypothetical force, nature, or anima, moves it. This, we may remark, is a notion which modern experimental science is demolishing every day. We are learning to emphasize more and more the essential activity of all matter, a truth forced upon us by considerations drawn from physics and from chemistry.

When Glisson, two centuries ago, pronounced the words "irritability of fibre," claiming that irritability is a property inherent in the tissue, and not a principle distinct from the body, he struck the key-note of modern physiology. This irritability is called into activity by divers external influences, which Glisson called irritant causes. These latter make the properties of organic bodies manifest. The *microcosm* is in relations of equilibrium with the *macrocosm*, but it is continually adjusting itself to disturbing causes. The surrounding cosmos is forever acting on the organism and the organism reacts on the cosmos by movements which Glisson called contractions. No more pregnant thought was ever presented to the human mind than this, of a moving force, organic and vital, inherent in the organism, viz., irritability, which is aroused to action by excitants. According to this conception living matter is a wonderful mechanism whose movements always originate in irritant causes outside of itself.

Haller in the eighteenth century developed with rare talent the ideas of Glisson concerning irritability, and maintained that this property is dependent on the primordial constitution of the muscular fibre. He endowed the nerves with a special property which he called sensibility. Subsequent workers in biology showed that irritability and sensibility are properties, not merely of muscular and nervous tissue, but of every part of living matter. Every unit of structure, and every congeries of of units is being continually acted upon by disturbing agencies in the cosmos, and is undergoing change, of which movement is an expression. Irritants may be normal, or they may be pathological. Here is the datum on which Broussais built his general pathology. Certain medicines diminish irritability and thus restore normal physiological function when deranged, others increase irritability, and hence are indicated when this is deficient.

The doctrine of the vital properties of organs—which was destined in the progress of science to replace the "faculties" of the system of Galen, the "archæus" of Van Helmont, the "anima" of Stahl—received a powerful reinforcement from Bichat in the beginning of this century. Before Bichat there had been no exact classification of the tissues and their functions. This greatest originating mind of the century divided the corporeal mechanism into its elementary tissues, and became the founder of general anatomy. His classification has been the point of departure of all subsequent classifications. He designates twenty-one tissues, but Leydig, bringing to the investigation the aid of the microscope, has reduced them all to four, which are the fundamental tissue-elements, viz.: the nervous element, the muscular element, the connective tissue element, and the cell element (*i.e.*, epithelium, blood-globules, glands).

What gave scientific character to the work of Bichat is the careful study which he gave to the properties of each of these tissues, and the fact of his having localized there an elementary vital phenomenon. Each elementary tissue represents a particular function. All the vital properties were relegated by him to tissues; the organs of the old physiology were superseded by more elementary parts, which account for the constitution and the phenomena of living bodies, as the simple elements of chemistry explain the phenomena of inorganic bodies. Bichat in the introduction to his "General Anatomy" clearly defines his stand-point: "The general doctrine of this work is to analyze with precision the properties of living bodies; to show that every physiological phenomenon is referable in the last analysis to those properties considered in their natural state; that every pathological phenomenon proceeds from their augmentation, from their diminution, or from their alteration; that every

[1] Vide Bayard's article on Homœopathy and Science in the Popular Science Monthly for October, 1883.

therapeutical phenomenon has for its principle the restoration of those properties to the natural standard from which they have departed."

The doctrine of Bichat, so grand and so simple, opened the way to new researches, to new investigations—in a word, to progress. The single idea, vital properties, properties of tissue, provoked minute investigation into organs, and gave a powerful impetus to experimental physiology. Speculations about mysterious causal entities were abandoned as fruitless and as useless, and as calculated to put a check on investigation, and the secrets of life were sought in observation of phenomena and in experimentation. Therapeutics derived an important stimulus from the new teaching; the aim and art of medication being now summed up in a few words, viz.: the restoration of the altered vital properties of the part affected. In calling the attention of physicians to the seat of the ailment, in insisting on the material alterations which characterize disease, and the necessity of restoring deranged function, and in creating the science of morbid anatomy, Bichat, though he died at the youthful age of thirty-one, has earned for himself the gratitude of the present and all future time. It was now possible to localize morbid lesions in special tissues, and the autopsy, for the first time in the history of man, became fruitful in useful results. We can now complete the natural history of disease (founded by the school of Hippocrates) by the pathological lesions.

Bichat's fundamental classification of the functions of the human body into functions of organic or vegetative and functions of animal life, has been adopted by most physiologists, and expresses an important truth. The larger part of our physiological processes are unconscious and involuntary; the animal life, or the sensory, conscious, voluntary life, is something as it were superadded to the organic or vegetative. And yet these are not *two* natures which have taken possession of us, but only *one*. The conscious mental life is only a higher development of the unconscious bodily life. The unconscious organic life is continually obtruding itself into the sphere of the conscious, and what was once conscious and voluntary, becomes organized as habit, and takes its place among the profundities of our organic unconscious nature. Bichat, moreover, erred in treating nutrition as a *function* of organic life. Nutrition is not a *function* of living matter, it is *living*. "*Se nourrir c'est vivre*," says Claude Bernard. The opposition or contrariety between life and death which Bichat predicates in his celebrated definition—"Life is the sum of all the functions which resist death"—does not exist, for in every living substance destructive processes are simultaneous with constructive, or organizing. It is a sort of elemental strife to which a whirlpool offers a faint analogy. Flourens did in fact apply the term "vital whirlpool" to the fundamental process whose two sides are organization or nutrition, and disorganization or denutrition. An acute and philosophical thinker in recent numbers of the *American Naturalist* (February and March, 1883) has shown how absolutely dependent are all the vital processes on oxygenation. Life forever swings between limits of chemical analysis and synthesis. Oxygen eats into and breaks down the complex molecules of protoplasm; nutrition rebuilds those molecules (nutrition, according to this writer, is simply organic chemical affinity). Nutrition locks up energy in the molecules produced. By oxygenation the stored-up energies of the body are set free and used as animal activity.[1] This is doubtless the highest view of the fundamental fact of life which inductive science yet offers, and has been concisely expressed in the definition of De Blainville, which is essentially the same as that of Letourneau—"Life is a double internal movement of composition and decomposition, at the same time general and continuous."

What Bichat lacked was a knowledge of the elementary principles of biology, a science which has undergone great development in our own times, and a knowledge of which is so essential as the ground-work of physiology and medicine.

If the study of morbid anatomy received an immense impetus from the labors of Bichat, the science of histology has been almost created since his day. If diseases must be studied in alterations effected in the tissues and fluids, then let us resolve these substances into their elementary parts and ascertain how the individual units are affected. The simple rude lens of Leuwenhoeck and Malpighi has been gradually evolved into the compound microscope, which has in our day revealed the cellular structure of all organic animal and vegetable tissue.

The next step was the development of histology on the basis of the cellular doctrine, and the cellular pathology, for which we are so much indebted to Virchow.

The field of vision has been extended to the infinitely little. To fix the disease in a cell, or in a group of cells, is, as Jacobi has said in this journal, "the finest localization possible."[2]

It is plain, then, that if we would understand disease we must understand the vital properties of the tissues in health, and under conditions of derangement, and the art of the therapeutist must be to restore those altered vital properties; and this will be the aim of every rational system of medicine.

THE BACILLUS WAR IN PARIS AND VIENNA.

A MOST animated discussion upon the subject of microorganisms took place recently in the leading medical societies of two great European cities, Paris and Vienna. The opinions announced are of especial interest as showing the earnest skepticism that still exists among many prominent medical scientists as to the real significance of micrococci, bacilli, and the like.

In the Academy of Medicine, on October 30th, M. Bouley made a report of a commission, consisting of himself and M. Vulpian, upon the experiments of MM. Bouchard, Capitau, and Charrins, with the supposed germ of glanders.

M. Bouley's report completely confirmed, he said, the claims to the discovery of the microbe of this disease. It had been captured, cultivated to the fifteenth generation in flasks of bouillon, then inoculated again, with the production of glanders.

After M. Bouley had finished, M. Colin arose and in

[1] Organic Physics, by Charles Morris.

[2] THE MEDICAL RECORD, September 29, 1883.

LIBRARY

the most emphatic manner denied the validity of the conclusions announced. There was no proof, he said, that a specific organism had been isolated and cultivated. The virus of glanders is not easily destroyed; and Bouchard's experiments only showed that it could be carried through fifteen dilutions of beef-tea! He did not deny that possibly bacteria might *carry* it.

M. Colin then proceeded to attack other alleged discoveries of specific organisms. "It is not true," he said, "that any bacteria exist in the blood of living horses suffering from typhoid. They simply develop a few hours after death, and their appearance is the result of decomposition. M. Pasteur has announced to the Académie that typhoid fever is inoculable. This too is an error."

He concluded by saying: "Is virulence attached to bacteria? Yes, probably. Is it attached to other formed elements in virulent matter? Yes, just as probably. Further: virulence exists in liquids where there are no formed elements. Where, then, does the special virus necessarily reside? We do not know!"

M. Bouley here interrupted the speaker, saying that M. Colin used phrases, while he invoked facts. He had seen the experiments of Bouchard and their results.

"You invoke facts," replied Colin, "which are only fictions. Your fifteen cultivations, for example, are myths. I have never been able to obtain from M. Pasteur any except liquids of the first and second culture, and I have always found in these other formed elements than the special microbes. Besides, M. Pasteur has always kept secret the methods of manipulation which he practises. Only his intimates know them. I have recently met savants who came all the way from Russia to learn his methods, and had been refused. This is the procedure of quacks, not of scientific physicians! I have heard much of the bacillus of tuberculosis and the preparations of M. Cornil. They show nothing as regards the specificity of the tuberculosis. These organisms have been found in the non-tuberculous."

M. Bouley here interrupted the speaker again, and a fierce altercation ensued, which compelled the President to interfere.

Turning now to Vienna, we find here also a sharp warfare of words occurring at a meeting of the Society of Physicians of that city. In this case the bacillus tuberculosis was the subject of controversy, and that blue-tinted organism sustained the attacks upon it rather better than did its bouillon-cultivated congeners of Paris. Dr. Heitler presented a paper upon the diagnostic and prognostic significance of the bacillus tuberculosis. He stated that in a very wide series of examinations he had found the bacillus always present in the sputa of the tuberculous, and never present in that of the non-tuberculous. He had also found a certain relation between the number of bacilli and the intensity of the morbid process. Dr. Heitler attacked Spina's views and experiments, and defended those of Koch.

Dr. Jakisch reported the result of some experiments in harmony with those of Heitler.

Prof. Kundrat defended Spina, and asserted that the tubercle bacillus had undoubtedly been found in cases of bronchitis, pneumonia, etc. He recalled to mind a case occurring in Nothnagel's clinic last spring, where the bacilli were found in the sputa. Upon a subsequent post-mortem examination there was found only bronchial catarrh with bronchiectasis. A second case occurred in Schrötter's clinic. In the patient's sputum were found the most beautiful bacilli, but on post-mortem there was only bronchitis and emphysema.

Dr. Jakisch intimated that in these few individual cases there might have been errors of observation, or that sputa might have got mixed, a suggestion which Kundrat sharply repudiated.

Dr. Weichselbaum thought from his numerous examinations that the presence of bacilli was an evidence of tuberculosis. He had never found the bacilli in the secretions of non-tuberculous persons. He admitted the accuracy of Kundrat's reported cases, and said that some bacilli have such a similarity to those of Koch, that additional tests may be needed.

Thus the matter stands. The accuracy of Pasteur's cultivation method is strongly questioned, and the validity of many of his results made a matter of serious doubt.

The bacillus tuberculosis of Koch has congeners so like it that staining methods alone seem insufficient in all cases positively to distinguish it. There appear to be non-tuberculous diseases in which this bacillus may sometimes be found. Though always discoverable in genuine tuberculosis, the number of bacilli is not always a test of the intensity of the disease.

Such seems to be the condition of the bacillus problem at present. Doubtless before long, new evidence will be furnished that will change the aspect of affairs.

We ought to add that the theories of Dr. Gregg, who regards micro-organisms as fibrinous products of decomposition, are unworthy of serious attention.

THE HEALTH OF CHINA AND ITS RELATION TO THE QUESTION OF FILTH.

From the medical reports of the Imperial Maritime Customs for the half-year ending September 30, 1882, some very interesting statistics are obtained relative to the prevalence, etc., of epidemic diseases among foreigners and natives in China. The local peculiarities of disease, and diseases rarely or never encountered in China, are also commented upon. A meteorological table also accompanies each of the several reports.

At Chefoo several cases of fever resembling in character that of typhus, although differing from it in some particulars, occurred, chiefly confined to the Chinese, only one foreigner having been affected.

In Ichang, although nature has endeavored to compensate by the surrounding country, yet the absence of the most simple sanitary precautions on the part of the natives is a source of the greatest danger. Night-soil is carried through the streets in open baskets at all hours of the day, nevertheless the privies never seem emptied, and the odors that emanate from them and from the vegetable gardens are simply sickening. Notwithstanding this, however, with one exception, there have been no serious cases of malarial fever or dysentery among the foreign residents of Ichang, and epidemic diseases, save small-pox, are unknown. As a rule the native population is apparently sturdy and healthy. The plague of parasites and of parasitic diseases, which is universal, is due to their dirty habits rather than to their vices.

At Kiukiang the health of foreign residents has apparently been very good, excepting during the last two months of the period mentioned, when an unusual amount of sickness occurred. This was ascribed to the heavy rainfalls and floods, when cases of intermittent fever and of dysentery were especially prevalent, due, as presumed, to the decaying organic matter left by the flood, as well as to the putridity of the water itself where it was stagnant.

In Ningpo the impending unhealthy condition of the community was happily anticipated by the enforcement of careful sanitary regulations, cleaning out of drains, etc., and the general administration of quinine.

At Amoy the health of the foreign population was fairly good, and epidemic diseases quite absent from the port. Canton also shows a record of general good health, particularly among foreigners. In other portions, however, in Yangchow, Soochow, etc., cholera raged with great violence.

On the whole—that is to say, while remembering the unsanitary condition of the natives, the abundance of filth, in many cases of months' or of years' standing—the prompt measures adopted by the several medical authorities deserve especial commendation, inasmuch as where rigidly enforced the mortality, not only of the foreign, but particularly of the native community, from epidemic diseases has been very materially lessened.

We have presented editorially the general health report of the various ports of China, believing not only that much valuable information may be derived from its account, but that an inferent bearing may also rest upon our own sanitary affairs at home.

THE NEW SURGEON-GENERAL OF THE ARMY.

THE appointment by the President of Colonel Robert Murray as Surgeon-General of the Army will be received with satisfaction, not only by the Medical Corps but by the profession at large. He brings to his responsible office all the requisites of an old and well-tried member of the Army Staff. He has served during his long career in every capacity as surgeon in the army and is practically acquainted with all the details of his department which now fit him for its chief. Aside from this he was in the direct line of promotion and his appointment must be viewed as an indication on the part of the President to honor the claims of those who by long and faithful services work their way to the front.

The best assurances that as Surgeon-General he will discharge the duties of his office faithfully and well are to be found in his previous honorable record as an officer of the army, his high moral character, and his well-acknowledged professional accomplishments.

MEDICAL MISSION TO CENTRAL AFRICA.—The Guild of St. Luke, of London, have undertaken to send a medical missionary to Central Africa to carry on the medical work of the Central African mission. Dr. Petrie has been selected, and guaranteed $1,000 for three years, by which time he will be pretty certain to be dead, if past experience teaches anything.

News of the Week.

A PROPOSED MONUMENT TO DR. J. MARION SIMS.—Dr. Harvey L. Byrd, of Baltimore, very properly suggests that an enduring memorial, worthy of his name and fame, should be erected to Dr. Sims in the Central Park of New York, the city with which they have been so intimately associated for a quarter of a century or more, and thus known throughout the hemispheres. The plans and details necessary for the accomplishment of the proposed work can be easily arranged hereafter.

THE AMERICAN RHINOLOGICAL ASSOCIATION is the name of an association organized in St. Louis recently, with a membership of twenty, representing six States. Dr. T. F. Rumbold was elected President; Dr. H. Marks, of St. Louis, Secretary.

THE CHOLERA IN BEIRUT, SYRIA.—The United States Consul at Beirut has sent an account of the appearance of cholera in that city during the past summer. It appears that after the breaking out of cholera in Damietta, last June, a quarantine was established against arrivals from Egypt. Persons quarantined were placed in a large lazaretto near the city, where they were subjected to very unfavorable hygienic conditions. Despite this fact only four cases of cholera appeared in the lazaretto, and strangely enough the disease did not spread. A few cases occurred outside the lazaretto, but neither did the disease spread here. It has been asserted that the cases were not true cholera. If they were it is difficult to explain why the disease did not spread.

COLLEGE OF PHYSICIANS AND SURGEONS OF CHICAGO.—Dr. Frank O. Stockton, of Newark, N. J., has been elected to the professorship of Diseases of the Nose and Throat in this College.

DECREASE OF PHYSICIANS IN AUSTRIA.—Commenting upon a newspaper statement that there was an excessive increase in the supply of medical men by the Austrian universities, the *Allgemeine Wiener Medicinische Zeitung* says that the average number of graduates in medicine, yearly, from all the Austrian schools, is about two hundred. The annual number of deaths among physicians in Austria is over three hundred and twenty. It does not appear, therefore, that there is an increase in physicians, but rather the contrary.

THE PRESBYTERIAN HOSPITAL AMBULANCE.—The Presbyterian Hospital has the finest ambulance in the city, and the swiftest ambulance horse.

THE RESPONSIBILITY OF EMPLOYERS FOR THE PAYMENT OF MEDICAL SERVICES TO THEIR EMPLOYEES.—A case of interest to physicians was recently decided in the Baltimore City Court. A lady sent for a physician to attend her nurse, who was sick at the lady's country residence. The nurse failing to pay the bill it was sent to the lady's husband, who also refused to settle it. The doctor then brought suit against the gentleman, and the court held that he was responsible for the payment for medical services rendered his employee, the doctor having been sent for by the wife, who had the right to make her husband responsible for the services rendered.

Reviews and Notices.

MEDICAL EDUCATION AND THE REGULATION OF THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA. Illinois State Board of Health. 1883.

THE industrious energy of Dr. Rauch, secretary of this board, has produced a work of great usefulness to the profession. It consists of a compilation of the laws regarding medical practice in Canada and in all the States of the Union where such laws exist. The number of physicians in each State in proportion to the population is also given. The list of medical colleges not recognized by the board, here published, has already been widely circulated.

By a typographical error on page 175 the total number of physicians in the United States and Canada is made to read 60,410 instead of 90,410.

ELEMENTS OF HISTOLOGY. By E. KLEIN, M.D., F.R.S. Illustrated with one hundred and eighty-one engravings. Philadelphia: Henry C. Lea's Son & Co. 1883.

THIS work is intended as a manual for medical students, and is written in a simple and, as far as possible, non-technical style. Although an elementary work, it is by no means a superficial or incomplete one, for the author presents in concise language nearly all the fundamental facts regarding the microscopic structure of tissues.

Regarding the mooted question of "reticulated protoplasm" Klein is rather non-committal, stating that this structure is observed "on very careful examination with good and high powers, and especially with certain reagents, in many instances."

The illustrations in the book are numerous and excellent. We commend Dr. Klein's "Elements" most heartily to the student.

THE MEDICAL STUDENT'S MANUAL OF CHEMISTRY. By R. A. WITTHAUS. Pp. 379. New York: William Wood & Co. 1883.

PROFESSOR WITTHAUS in adding another text-book on chemistry need make no apology for increasing the already long list of works on this subject, although he modestly claims that the book "is intended solely for the use of a class of students whose needs in the study of this science are peculiar," since it is well known that new facts are constantly being contributed to the literature of this branch of science, and that now and then the subject needs the revision of such a fresh and able worker as the author of this book. Moreover, his experience as a teacher in chemistry and its applications to science specially fit him for the work in hand. In the preface the author says: "While the main foundations of chemical science, the philosophy of chemistry, must be taught to and studied by all classes of students alike, the subsequent development of the study in its details must be moulded to suit the purposes to which the student will subsequently put his knowledge. And particularly in the case of medical students, in our present defective methods of medical teaching, should the subject be confined as closely as may be to the general truths of chemistry and its applications to medical science." Professor Witthaus has had exceptional opportunities in the pursuit of his studies in Germany and France, and here in his own country he has established a wide reputation both as a teacher and as an expert in toxicological and physiological chemistry. In the preparation of the manual under review the author has excluded as far as possible, "without detriment to a proper understanding of the subject, those portions which are of purely technological interest," while "chemical physiology and the chemistry of hygiene, therapeutics, and toxicology have been dwelt upon."

In the first part of the work the principles of chemical science are treated of, but an extended study of chemical physics is purposely avoided, except in so far as is absolutely requisite to a proper understanding of the subject—the more extended study of physics belonging rather within the domain of physiology than of chemistry.

The second part treats of special chemistry, where the author has departed in certain respects from the methods usually followed: thus the elements are classed, not in metals and metalloids, which he regards as arbitrary and unscientific, but into classes and groups according to their *chemical* characters, and "in the text the formula of a substance is used in most instances in place of its name, *after it has been described*, with a view to giving the student that familiarity with the notation which can only be obtained by continual use."

The third part of the work is devoted to those operations and manipulations which will be found to be of utility to the student and physician. Physicians will find in this useful manual practical directions for the examination of calculi, and of simple chemical compounds, and quantitative methods of interest to them are also described. The methods recommended are simple, and the ones best adapted to the limited facilities of the general practitioner. Although no special claims are put forth in respect to the value of the work upon analytical chemistry, the author has "endeavored to bring that branch of the subject rather into the foreground so far as it is applicable to medical chemistry." The metric system has been followed throughout the book; but in deference to those who prefer to retain the old method, troy and apothecaries' weights have been introduced in brackets, and the value of degrees in Fahrenheit have likewise been made to follow the Centigrade. Wherever necessary illustrations have been introduced, and there are a large number of useful formulas and tables contained in part third, which is devoted to laboratory technics. The make-up of the book is good, the type plain, and it is altogether a credit to the publishers.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Sixteenth Annual Meeting, July 17, 1883. Vol. III., part 2. Published by the Society. New Bedford, Mass.: Mercury Publishing Company, printers.

UNDER the efficient management of the Secretary, Dr. J. J. B. Vermyne, the transactions of this society are given to the public within three months from the date of the annual meeting. The volume contains papers read by Drs. Holt, of Portland, Me.; Knapp, of New York; Todd, of St. Louis; Kipp, of Newark, N. J.; Seely, of Cincinnati; Sexton, of New York; Andrews, of New York; McKay, of Wilmington, Del., and Burnett, of Philadelphia, together with thirty pages of discussions which they elicited. The papers and the discussions do credit to the society, and the volume should be in the hands of all who are interested in diseases of the ear.

TABULÆ ANATOMICÆ OSTIOLOGIÆ. Editæ a CAROLO H. VON KLEIN, A.M., M.D. Cincinnati, O. 1883.

THE author of the work before us is, perhaps, somewhat of an enthusiast, but the work itself is very good, and gives evidence of a vast amount of labor. The book comprises thirty-two plates, presenting severally the various groups of bones forming the human skeleton. The various names, etc., are given in Latin only, one of the objects of the work being to present a language which shall, especially in its technical expressions, become universal among the profession. Regarding the execution of the work, we do not think that the drawings, or more particularly the engravings, show as much practical knowledge on the part of the artist of the subject in hand as such plates should exhibit, *e.g.*, in the plates representing the occiput; while for an excellent fine line engraving the work deserves much credit, yet this has been allowed to supersede the object in view, and even in this respect the lights and shades are in many cases met too suddenly for the faithful representation intended. Hence we would suggest far more accurate drawings and less fine execution. Moreover, some of the plates are simply impossi-

bilities anatomically, or strange anomalies, evidently through fault of the engraver.

The adoption of an universal language, however, *i.e.*, the Latin, as is suggested, and which the author would achieve for all the medical world, would, it is feared, hardly be sustained so long as our American medical machines continue so prolific in their grinding. And although we should highly endorse our friend in his esteemed labor, yet we think he should be prepared to find that the accomplishment of his work may be doomed to disappointment.

The work is presented in very handsome form, and will be appreciated by student and practitioner alike.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By OREN D. POMEROY, M.D., Surgeon to the Manhattan Eye and Ear Hospital; Ophthalmic and Aural Surgeon to the New York Infant Asylum, etc., etc. With one hundred illustrations. 8vo, pp. 392. New York: Bermingham & Co. 1883.

IN the above volume the author has presented quite a valuable work on the diagnosis and treatment of diseases of the ear. To many this portion of the subject may perhaps appear too thorough, in reading the book —that is to say, to the exclusion of much valuable matter which we think ought justly to have been embodied in a work of this kind, viz., anatomy and physiology, the absence of which, as the author frankly states, is noticeable throughout. The several forms of aural disease are dealt with in a manner exceedingly satisfactory. In some of the subjects the etiology is not so complete as might be wished for, but the symptomatology, diagnosis, and treatment are indeed very well presented. Prognosis is also given. In addition, the various instruments required in the examination of the ear are presented, with cuts, and instructions as to the methods of using them, etc. The author's views on the best means of examining the throat and nares are also given, together with the necessary instruments (illustrated). Various other affections of the ear are included in the work: malignant disease, syphilitic inflammation, and affections dependent on hereditary syphilis, as well as disease of the ear confined to the labyrinth or acoustic nerve. The various instruments for aiding the hearing—trumpets, the audiphone, and Japanese fan—also receive consideration. On the whole, the work is quite exhaustive in its scope, and will represent an authority on this subject which we believe will be duly appreciated by the profession.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. By GEORGE M. BEARD, A.M., M.D., and A. D. ROCKWELL, A.M., M.D. Fourth Edition. Revised by A. D. ROCKWELL, M.D. With nearly two hundred illustrations. 8vo, pp. 758. New York: William Wood & Co., 56 and 58 Lafayette Place. 1883.

AGAIN is presented to our notice one of the most useful text-books of the day, of the greater value because it leads in a province of practical medicine hitherto unworked.

The many points of instruction and interest contained in the body of the work have been duly noticed in reviews of preceding editions. Thorough and careful revision adds to its former excellence. The chapter on static electricity is new, and doubtless will excite much attention, as many of the ideas advanced will be made the subject of further investigation. The crowning effort of the work, the treatment of extra-uterine pregnancy, is of inestimable worth. The literature upon this subject, until within a few years, has offered anything but a hopeful issue from this unfortunate condition. Vaginal section, gastrotomy, injection into fœtal nest, etc., with attendant dangers and horrors, were to be apprehended. A series of seven successful cases is recorded. The method of treatment is simple in detail, sure in effect, causing little pain and danger, reducing the dread consequences of this unavoidable complication to the minimum. The advantages to be obtained by electrolysis in regional surgery is being more appreciated to-day than ever before, and demands from the general practitioner his closest attention. A careful perusal of this work will open to him a mine of wealth, as it is exhaustive. No department of electro-therapeutics is left untouched.

For years Drs. Beard and Rockwell have labored in this department of medicine with assiduity and success, meriting the approbation of the scientific world. Dr. Beard has gone hence; may his co-worker attain to greater merit than was their privilege when together.

PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. By FESSENDEN N. OTIS, M.D., Clinical Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons; Surgeon to Charity Hospital, etc., etc. 8vo, pp. 584. New York: Bermingham & Co. 1883.

THE work before us is certainly a very complete one on the subject of which it treats. The volume is divided into two parts. The first includes gonorrhœa, chancroid, and syphilis, the latter of which is minutely dealt with in every detail, including the initial lesion, hereditary transmission, diagnosis, etc. Lesson VI. presents the progress of syphilitic infection, varieties, and complications, and the treatment of the initial lesion. The early constitutional forms of syphilis are then taken up, followed by the treatment of syphilis in the acute stage. Numerous clinical cases are then given, illustrative of the various forms which the initial lesion may present, and of the various lesions associated with and following the same. The mucoid form of the lesion is also spoken of, together with clinical cases showing the results of treatment. Lesson XVII. presents the sequelæ of syphilis, gummy tumors, etc., and the various sequelæ involving the nasal and other bones, and those producing brain symptoms, followed by syphilis of infants, and hereditary syphilis. Chancroid and its nature is then taken up (Lesson XXIV.), together with its diagnosis and treatment. In Part II. gonorrhœa is very thoroughly considered, the nature of gleet and its dependence upon stricture, and the complications of gonorrhœa. Following this (Lesson XLIV.) urinary extravasation, epididymitis, and prostatitis are spoken of. The remainder of the work is almost entirely given up to the consideration of urethral stricture, its examination and treatment, and especially to spasmodic stricture. The author's views are also fully supported by a large number of clinical cases. Finally, a closing chapter is devoted to digital exploration of the bladder, by means of an incision through the perineum, as an aid to diagnosis in obscure cases. The work is very thorough in every detail, and, coming from the pen of one who has been before the professional public for many years as a teacher in this branch of surgery, will no doubt be accepted by both the student and practitioner.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL'S OFFICE, UNITED STATES ARMY—AUTHORS AND SUBJECTS. Vol. IV., E–Fizes. 4to, pp. 1033. Washington: Government Printing Office. 1883.

THE very valuable and very complete "Catalogue of the Library of the Surgeon-General's Office" has advanced to its fourth volume, and now includes authors and subjects from E–Fizes. Altogether this volume contains 4,802 author titles, representing 1,926 volumes and 3,885 pamphlets. It also includes 12,361 subject titles of separate books and pamphlets, and 48,977 titles of articles in periodicals. Too much praise cannot be accorded to Surgeon J. S. Billings, U. S. A., the accomplished librarian of the Surgeon-General's Office, for the admirable manner in which he has carried on the work of cataloguing the vast treasures of medical literature under his supervision.

Reports of Societies.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, November 21, 1883.

MARK BLUMENTHAL, M.D., PRESIDENT, *pro tem.*

THE IMMEDIATE OPERATION FOR LACERATION OF THE PERINEUM.

DR. R. C. M. PAGE read a paper on the above subject (see p. 590).

DR. W. T. LUSK was invited to open the discussion, and said he was in full agreement with the author of the paper with regard to the practice advocated, and yet he had been so slowly converted that perhaps it might be interesting to relate his experience, and how it came to pass that he regarded the immediate operation as the proper one to perform under the circumstances indicated in the paper. In 1871 he began his service as obstetric physician in Bellevue Hospital, and at that time a great deal was being written in Germany concerning the immediate operation. He therefore began the use of the method somewhat enthusiastically, but after having failed in quite a number of cases abandoned it entirely. When, a little later, Dr. Noeggerath read a paper before the New York Academy of Medicine on this subject, Dr. Lusk formulated his objections to the immediate operation, and there stated that it rarely succeeded; that it was difficult to estimate the extent of the lesion at the time of delivery, and that many patients were subjected to operations in whom it would not have been found necessary subsequently. He also stated at that time that it seemed to him the cases for immediate operation should be limited to those where the head was born soon after the beginning of the second stage of labor, before it had occupied the pelvic cavity for a long time, and before pathological changes had taken place in the tissues below the child's head.

In estimating the extent of the laceration, Dr. Lusk thought the method of putting one finger into the rectum and the thumb into the vagina, even where the rent was quite extensive, was not very satisfactory. He did not believe that spontaneous union takes place very often to more than a limited extent, but he thought there were many cases in which we fail to recognize the slightness of the injury inflicted.

Continuing his experience, he said that later on, in private practice, he was introducing the sutures into a ruptured perineum about three hours after the birth of the child, and suddenly he was flooded with blood. The patient had a violent hemorrhage, which he regarded as undoubtedly due to the excitement produced by the operation. He therefore reached the conclusion that it was not only unnecessary, often did not succeed, but that it was not entirely devoid of danger. However, later, as he adopted the operarion in private practice, he was more favorably impressed with it, and had found that healing had taken place readily, that the patients were up and about on the tenth or twelfth day, and he was encouraged to try the operation once more in hospital practice. At the Emergency Hospital all his operations were entirely successful for a time, but at Bellevue Hospital only about half of the operations were successful, and it was not very satisfactory. He then reached the conclusion that all emergency cases would do well, but not long afterward the operation failed in all the emergency cases. Again reviewing the situation and studying the cases, he reached the conclusion that at times all cases would fail; at other times all cases would succeed, and that the results depended altogether upon atmospheric conditions and the condition of the lochia. If the atmospheric conditions are unfavorable, and the lochial discharge undergoes decomposition quickly and extensively, the operation wounds will not heal.

So far as the operation itself is concerned, he had advocated the use of Peaslee's needle, and thought it the best that could be used in the treatment of cases where the rent does not extend through the sphincter ani nor up the septum. A very prominent reason why he employed Peaslee's needle was because it did not break.

Recently, in looking over his hospital obstetric record, he found that he had operated in twenty-four cases, twenty-three of which were successful, and in one there was partial failure, due to a certain amount of carelessness with which the operation was performed. He thought it not of any special advantage to compare the primary with the secondary operation. The question is not whether the secondary is more dangerous than the primary. The primary has been so successful in a large number of cases, and is so simple in its performance, and does so much to prevent the woman from suffering during child-bed, avoids suffering for weeks or months before the secondary operation is performed, that it seemed to him there could be no doubt with regard to the propriety of the primary operation. He must say, however, that not all cases of slight laceration necessitated the introduction of sutures. He thought it very probable that if in obstetric practice we were a little more careful in the observance of some of these little points much more suffering might be alleviated than is now the case.

DR. W. GILL WYLIE said his experience had been confined almost entirely to the secondary operation, but he agreed with Dr. Page in advocating the immediate operation. There are a certain number of cases where there is only slight tearing, so far as the skin or mucous membrane is concerned. Yet there occurs a subcutaneous rupture or stretching of the deep pelvic fasciæ that are united to or at the perineum, or dilatation and separation of the posterior wall of the vagina takes place, which would not always be relieved by the immediate, and are sometimes difficult to remedy in old cases by the secondary operation. It will soon be a recognized fact that, so far as the position of the uterus is concerned, the perineum can only indirectly affect it; for the perineum is not a support to the normal uterus, but when partially torn through may allow fecal matter to crowd forward the posterior wall of the vagina, and, by distending it, cause the vagina to pull the uterus downward and backward. His experience had been, that displacement, especially retroversion, is much more likely to result from a partial rupture involving the inner or upper angle of the so-called "triangular body" than in those cases where the whole sphincter ani has been completely destroyed. In five out of six cases that he had operated upon in the past year, where the sphincter was destroyed, only one had retroversion, and, although in two of the others there was some general prolapse, yet neither the position nor condition of the uterus made the operation necessary; it was done to restore the sphincter. He knew of one woman, the mother of six children, who had the sphincter and vagina lacerated nearly to the uterus with the first child, and they still remain so, yet the uterus is in nearly the normal position. He believed, therefore, that the most important part of the perineum is that where the vagina joins it and keeps back the fecal matter as it descends the curves of the sacrum, deflects it backward toward the anus, thus preventing it from pushing forward and distending the vagina, and indirectly displacing the uterus downward and backward. In these cases the ordinary operation is only a partial success, and the "clover-leaf shape," where the central part represents the denuded rectocele, and the lateral the two sides of the vulva, will often result in what he called a skin-flap perineum. The most important part to denude and to reunite is the depressed angles on either side between the central and lateral parts of the clover leaf. They are the most difficult to denude and to bring into close apposition, yet when they are together the rectocele is depressed backward and the sphincter ani pulled forward, and thus the fecal matter is deflected backward

out through the anus. He does not sew the depressed angles up separately, as recommended by Dr. Emmet, but brings them into apposition.

As to statistics, many cases reported cured are merely skin-flaps that look well at the time, but soon stretch and yield so much that the patient is left in as bad a condition as before the operation. No one has a right to claim a cure until six months or a year or two has passed, and time and use have tested the result. In his argument for the immediate operation, Dr. Page did not speak of the bad influence of time in bringing about atrophy and degeneration of the torn and disused tissues composing the perineum. This is important, for on this account such cases are more difficult to treat and secure the best results. This atrophy and loss of tone account for the severe cases of procidentia, which so many even to-day consider incurable, yet when carefully operated upon can almost all be cured by denuding deeply and bringing the parts together well up in the vagina.

He would like to ask if Dr. Page recommended constipating the bowels after operations.

Dr. Page: No, I merely said that it may be done, but I regard it as bad practice.

Dr. Wylie thought if the doctor analyzed his hospital statistics he would find that the failures (immediate failures) were due to the old practice of constipating the bowels. To-day primary union should be secured in nineteen out of twenty of all cases, but to do so the bowels must be moved every day.

Dr. McLaury referred to a case in which union was complete, but a dose of castor-oil swept the results of the operation away completely.

Dr. W. R. Gillette said that some years ago he went on record as opposed to the immediate operation, and the opinion which he then gave was based on his experience in quite an extensive practice in the Maternity Hospital on Blackwell's Island. Since that time, however, he had been performing this operation invariably in private practice, and must say that he would as soon leave a woman without the ordinary attention which the accoucheur gives her as to omit repairing the perineum at once, if he found that any laceration whatever had occurred, no matter how slight. He believed it necessary to stitch up every rent, and in that respect he disagreed with Dr. Lusk. It was not for the purpose of sustaining the uterus or other pelvic organs, as he had not so much belief in the perineum as a sustaining body, as "the keystone in the arch," as many of his friends seem to have, although it was sometimes a very important factor in results obtained. What occurs as a result of trivial lacerations is an enlargement of the ostium vagina, which is of considerable psychical importance. He preferred silver-wire sutures, because if on examination at the end of the first, second, or third day, it were found that the parts were not closely coaptated, another twist could be given the sutures. Another point which he regarded as of special importance is the introduction of deep sutures, and he made it a rule to go as deep as possible.

Dr. James L. Little agreed with the author of the paper concerning the propriety of the primary operation. He had not been in the habit, however, of sewing up every laceration. He did not believe that primiparas could be delivered without a certain amount of laceration taking place, and he did not regard an operation in those cases as necessary. Dr. Page had expressed the opinion that when laceration occurs, it almost always takes place with delivery of the head, but Dr. Little entertained the opinion that the shoulders did the tearing, and cited a case in illustration, in which after the head was born there was sufficient delay to give opportunity to inspect the parts carefully, and no laceration whatever had occurred. But after the shoulders were delivered it was found that laceration to the extent of an inch or more, had taken place. It had been his custom to use silver wire for the deep sutures.

Dr. A. M. Jacobus reported a case in which spontaneous union of the lacerated perineum had taken place. The woman was twenty-six years of age, a primipara, and there was complete rupture with post-partum hemorrhage, but union of the laceration occurred by first intention *without* an operation. A few bleeding vessels were twisted, the parts were cleansed with the utmost care, all clots were removed, and the lacerated edges were carefully approximated, the woman placed upon her back, and the knees tied together. The urine was drawn with the catheter. On inspecting the parts on the second day it was found that union by first intention had taken place throughout.

Dr. S. Baruch thought the paper and remarks made by the gentlemen were of special importance to the general practitioner, because they confirmed the view that the accoucheur is responsible for a large number of ugly deformities which are seen after parturition. He regarded it as criminal for any physician to leave a case of labor without examining the genitals of the woman. Both primiparæ and multiparæ should be examined, the latter by the finger and the former with the eye and a good light. There is no procedure from which he had derived more gratification than the primary operation for lacerated perineum, and he had found but little difficulty in getting the consent of the patient and her friends for the performance of the operation. He believed with Dr. Gillette, that every laceration should be repaired, no matter how slight, and regarded silver sutures as the best. It had been his custom to use a compressed shot to hold the end of the suture and cut it short. He had the urine drawn regularly, and used carbolized injections.

Dr. Edwin F. Ward favored the immediate operation, and said that it had been uniformly successful in his hands. He had always employed the silver-wire sutures, except in one case.

Dr. W. Fruitnight reported a case, that of a woman twenty-six years of age, whom he delivered with forceps. The parts were œdematous, complete laceration of the perineum occurred up as far as the internal sphincter. Post-partum hemorrhage occurred, and also hemorrhage from the perineum. In this case the condition of the patient was such that he did not think it admissible to undertake to perform the operation. He therefore cleansed the parts thoroughly, kept the patient upon the back for two days, and afterward alternated her position from the side to the back, and syringed the vagina with carbolized solution. Sloughing of the vagina upon the lateral walls occurred, and subsequently the temperature rose to an extent which made him believe that there was some decomposing material within the uterine cavity, and he resorted to intra-uterine injections with immediate and permanently beneficial effect. The case then progressed favorably, and on the eighth day it was found that the perineum was completely united. At the end of three and a half weeks the woman was about her room, and experienced no inconvenience whatever from inability to control either the fæces or flatus.

Dr. Charles S. Wood stated that his experience did not confirm that of most of those who had already spoken. He had had occasion to see a good many cases of labor in the course of thirty-five years, and had not been in the habit of performing the primary operation. In cases of extensive laceration, extending to the rectum, he should perform an operation, but it was questionable whether or not he would perform the primary operation; for he had seen cases in which union had occurred and had been as perfect as could be obtained by any operation. Besides, lacerations to the first or second degree almost invariably recover, leaving the parts in as normal condition as they ever are after childbirth. He had been particularly interested in the remarks made by Dr. Wylie, as he had had occasion to see more injurious effects, more broken-down women, in cases where there was no actual rupture of the perineum than where there was, and was pleased to hear the facts expressed as they had been by Dr.

Wylie. He had seen but few ill results following rupture of the perineum without operation. He believed, if in every instance we should examine the parts, find what might be called rupture of the perineum, let it alone and examine subsequently, it would be found that the apparent laceration had passed away. This condition is not a real laceration, but an apparent laceration due simply to relaxation of the parts.

THE PRESIDENT said that during a practice of thirty years it had been his fortune to see comparatively few cases of laceration of the perineum. He made it a special point to be very careful of the perineum, and remembered only two cases in which complete rupture took place into the rectum. One of these passed from under his observation, but in the other the secondary operation was performed, and successfully. In all the other cases in which laceration had occurred the injury had been slight, and his practice had been to stitch them together at once, whether the rent was a half inch or an inch and a quarter in extent, and as a rule no trouble had followed.

With regard to the chances of over-estimating the damage done, he thought it was not easy to say how much the injury really is, and related a case in illustration, that of a primipara, advanced in years, who was delivered with forceps, and notwithstanding the attention which three attendants could give her, there was a laceration, as it seemed to him into the rectum. No operation was performed, on account of the condition of the patient. The result was that when two weeks afterward a final examination was made he found the wound entirely closed, except, perhaps, for three-quarters of an inch at the posterior end of the vulva, where he introduced a suture more for the purpose of hastening a cure than from necessity. In this case the two gentlemen who were assisting him insisted that the immediate operation should be performed, but he did not approve of it on account of the condition of the patient, and the result was as stated. Of course it went to prove that we might overestimate immediately after labor the actual damage done. But while he recognized that fact, he was fully convinced of the other fact, that in the majority of cases, where laceration is not so extensive and does not involve the sphincter ani, it is still wise to make the primary operation at once and support the perineum.

DR. MCLAURY believed with Dr. Wood that many of these cases would heal spontaneously.

DR. COLE had found that slight lacerations, those not extending more than half way down, got well by strict observance of cleanliness and position of the patient quite as favorably as with the operation.

DR. PAGE, in closing the discussion, said that he had not, nor did he ever expect to use Peaslee's needle; that he thought there was no necessity for drawing the urine if the woman voided it while upon her hands and knees; that he had not seen a case where he had been obliged to tighten the sutures after one or two hours; that he stated in his paper that medicine to constipate the bowels had been recommended, but he regarded it as bad practice.

DR. GILLETTE said that Dr. Page perhaps had misunderstood him, as he did not expect to tighten the sutures in every case at the end of twenty-four hours or two days, but that he had in a few instances seen shrinking of the parts at the end of twenty-four hours, which made it necessary to tighen the sutures.

The Society then went into executive session.

THE ESSENTIAL ELEMENTS OF HEALTHY RECREATION, according to Sir James Paget, are "uncertainty, wonder, and the exercise of skill." It would be worth while to see how many of these elements enter into the conventional "Sunday excursions," so much praised by the popular press for their health-giving qualities.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual and Stated Meetings, November 26, 1883.

THE adjourned annual meeting was called to order by DR. DAVID WEBSTER, President. After the reading of the minutes of the annual meeting, the

REPORT OF THE COMMITTEE ON HYGIENE

was read by the secretary. It consisted of four parts, the first part was by DR. E. G. JANEWAY, on

MORTALITY STATISTICS AND EPIDEMIC INFLUENCES.

The mortality for the nine months for the year ending September 30th has been less than for the corresponding period for 1881 and 1882. It has, however, been somewhat greater, both absolutely and comparatively, as regards increase of population, than that for the same period in the years 1878–79–80. Then followed figures showing the absolute difference for ten years.

The work of systematic vaccination was begun in 1875 and continues at the present time. The corps at the Board of Health charged with this work has performed 119,856 primary and 430,783 revaccinations. By the labors of the Board of Health the disease has been checked on all the occasions on which it has appeared. The mortality from small-pox is only one-half to one-fourth what it was in the six years preceding 1877. Physicians should urge this work, as, when small-pox has only prevailed to the limited extent that it has done during the six years just ending, the people become careless, and persuasive vaccination by public authority becomes difficult. It is far more essential to keep up thorough vaccination now than to wait for an invitation after the initiation of another outbreak of the disease, which will find its victims among the careless and the obstinate. Dr. Janeway then presented the mortality tables for measles, scarlet fever, diphtheria, etc., for the three-fourths of each year from 1872–83 inclusive. They showed the fluctuating character of mortality for measles, scarlet fever, and diphtheria, from which it seems probable that, owing to the moderate number of deaths from scarlet fever this year we should witness next year a marked increase for this disease; whereas for measles the probability would be that there would be a considerable diminution. Diphtheria is on the decline, and from the previous course of the disease it is possible that this diminished mortality may continue for another year or more. Pneumonia has produced 41 less deaths than last year, 235 more than in 1881, and 634 more than in 1880.

During last summer the mortality from diarrhœal diseases had been comparatively moderate. From a comparison of the mortality of these affections Dr. Janeway felt that, making all due allowance for all possible error, a considerable number of lives had been saved as a result of the employment of a summer corps of the Board of Health, and of the active charity of New York City.

With regard to typhoid fever, he feared, owing to the defective water supply, a decided increase in the mortality had occurred. But for the efforts of the Board of Health the disease would have spread greatly and extended over a number of years. Physicians should see to it that the Board of Health is properly maintained, aided, and encouraged in its work. At times physicians have neglected or, by concealment, have failed to notify the Board of Health of the existence of contagious diseases, with the effect of producing an epidemic in some cases.

The second part was by DR. O. D. POMEROY,

ON SOME POINTS IN THE HYGIENE OF THE EAR.

Ordinarily the ear is not affected by exposure to the air. All tuberculous subjects, those of a strumous habit, and a considerable number who rank as peculiarly

sensitive to atmospheric influences, are exceptions to the general rule. Damp air is much more apt to act perniciously than dry air. Sea-bathing is often injurious from the direct application of the cold water to the meatus giving rise to otitis media; or, from the violent concussion of a wave upon the meatus, or the entrance of water into the Eustachian tubes. Fill the meatus with cotton and tell the patient not to inhale water or allow it to get into the mouth.

The effect of loud and discordant noises in the ear is often very pernicious. If the patient is removed from the noise before profound deafness results, he may spontaneously recover a good degree of hearing or become wholly convalescent. Riding in railway cars with the windows open, ship-calking, and confinement in the never-ending clicking noise of the telegraph instrument, may act perniciously on the ear. Musical sounds do not seem to do harm to the ears. Monotonous and discordant sounds seem alone to operate injuriously on the ears.

Cannon-firing, or the discharge of firearms, or the concussion of any explosive sounds, especially when occurring unexpectedly, is likely to do great harm to the hearing. It may rupture the drum-head, or at once render the acoustic nerve unfit for functional activity. Hold the mouth open while the gun is being fired, so that the concussion may act simultaneously upon both surfaces of the drum-membrane. The effect of compressed air, as experienced in the ears of divers, caisson-builders, etc., is often very pernicious. The principal mode of obviating such pernicious consequences is to cause a frequent intercharge of air between the throat and the tympanum. This is accomplished by catheterization, either with the Eustachian catheter or Pomeroy's faucial catheter, or by Politzer's or Valsalva's operation. Sometimes simply swallowing, either with or without the stoppage of the nostrils, will be sufficient, in going from one compartment of a caisson to another having a different air-pressure.

The ears require to be "changed," as the expression is; that is, induce an intercharge of air between the throat and tympanum, so as to equalize the pressure. On the score of violence inflicted on the ear, the common practice of boxing the ears of children is liable to result in serious damage; pulling and pinching the auricles is much to be reprehended. With reference to the prevention of impaction of cerumen in the meatus, disease of the ears for the most part may be predicated when this tendency exists, and no efforts at cleanliness can prevent it. *Sunstroke* occasionally affects the hearing unfavorably.

The third part was by Dr. Stephen Smith,

ON SEWER-GASES.

Sewer-gas has been recognized as a powerful factor in the cause of that large class of preventable affections known as "filth diseases." The writer then spoke of the solution of the question of the prevention of the entrance of sewer-gas into dwellings, of the far more important question of ventilating sewers themselves, and of the system adopted by the Department of Public Works for the accomplishment of this purpose. Dr. Smith gave practical illustrations of the evils of the present system of ventilating sewers, that is, by means of perforated covers to the man-holes in the streets. He referred especially to Forty-second Street, which is seldom free from the odor of sewer-gases, and frequently for days and nights together the odor is so intense as to raise the inquiry of the residents as to the possibility of the odor from the gas manufactory miles distant reaching them. In damp, foggy weather the residents have been obliged to close their windows at night to shut out the foul odors. He thought it very evident that this method of ventilating sewers is in every respect objectionable. Practically it is equivalent to having open sewers running through the streets of New York. There can be no effective method of removing the gases of sewers except by apparatus which is aspirating in its operations. The gases should be drawn out by the action of forces which are constant and altogether independent of atmospheric changes, and delivered into the external air at an altitude which renders it impossible for them to penetrate any room occupied by human beings at any time. The subject above considered ought to receive the attention of the Board of Health. In answer to complaints of citizens, and requests that the nuisances be abated, that body refers to the Department of Public Works. Though the sewers are managed by that department, yet the Board of Health is not thereby exonerated from obligation to protect the public health against the dangers to life or the detriments to health which the Department of Public Works or any other department creates.

The fourth part was by the Chairman of the Committee, Dr. S. Oakley Vander Poel, on

THE HYGIENE OF HIGH HOUSES.

The Committee protested against the erection of high buildings from a hygienic point. *First*, with reference to the inmates. Since the inception of this question in building no general epidemic, such as all large communities are liable to, has occurred. Isolation of the sick in all such maladies is a prime factor to prevent spread of the disease. In the buildings constructed having so many families, such isolation would be practically impossible. Either through necessary attendance, contaminated clothing, or currents of air, the epidemic poison would be carried to every occupant, and the persons now eager to secure apartments therein would be as anxious to desert them. The families in the first three stories are to a great degree deprived of sunshine. The importance of this to the thickly denizened population can hardly be over-estimated.

So much of the surface of the lot is occupied both for obtaining room and to give solidity to the high walls, that it becomes necessary to resort to every expedient to procure the necessary circulation of air and ventilation. Chief among these are the air-shafts running from the bottom to the top of all such houses. Into these, windows open either from the inside rooms, or these windows may serve as ventilators to water-closets and bath-rooms. While the houses and plumbing are new no unpleasant effects may follow this procedure, but, as experience has too often shown, defective plumbing in any of the lower stories will allow miasm to be wafted to every story above through the open windows upon these shafts.

For economical reasons, most of the closets and bath-rooms are placed upon one line of piping. Should typhoid fever, or possibly cholera, occur in the lower stories, and any defects exist in the traps above, the poison would contaminate the apartments so exposed.

Second.—Their influence is more baneful upon the surrounding property and streets. Opposite and adjoining houses receive no direct rays of sunshine. The streets remain damp, and of necessity more or less filthy. This constant dampness and lack of sunshine is more or less pernicious. All methods of disinfection and destruction of disease germs depend upon the active oxidizing effect of the material employed. In our streets, next to cleanliness the most important factor in oxidation is the sun's rays.

These evils are not confined to the residents of the high buildings, but to those also on the opposite side of the narrow streets. Private houses, before cheerful and healthy, become gloomy and unhealthy. Fictitious currents of air are established which not only make smoking chimneys, but may reverse the currents from the underlying pipe from the roof connecting with the soil pipe. While apartment houses in our crowded population with limited area may be a recognized necessity, a limit of height, regulated by the width of the adjoining street, should be required as a sanitary necessity.

ADDRESS OF THE RETIRING PRESIDENT.

DR. DAVID WEBSTER then addressed the Society, making brief reference to the work which had been done during the past year in the way of prosecuting illegally qualified practitioners. He was also pleased to be able to note that during the year a new interest had been aroused in scientific work. More scientific papers had been offered than the limited number of meetings of the Society could receive, and the average attendance of the meetings had increased. Notwithstanding the large increase of members, there is still room for missionary work in that direction. Since the law of 1880 went into effect it has been the rule of the Comitia Minora to recommend for membership none but legally qualified practitioners. This rule has debarred several excellent physicians who, having graduated at medical colleges *without* the State, and not having joined the County Medical Society before the law went into effect, could not become legally qualified without having their diplomas endorsed by the faculty of some duly chartered medical college within the State. These gentlemen have objected to the trouble and expense of getting their diplomas endorsed, and though they have registered at the County Clerk's Office, are still practising illegally.

DR. WEBSTER then read the names of the members who had died within the year, and referred to their work and the influence which they exerted. In conclusion he thanked the Society for the uniform courtesy extended to him while serving it as president.

THE SECRETARY read the resignations of Drs. J. H. Low, M. B. Dubois, W. Thurman, J. C. Lay, and Austin Flint, Jr., which were accepted.

The adjourned annual meeting then adjourned.

Stated Meeting.

DR. S. OAKLEY VANDER POEL, President, called the Society to order and delivered his

INAUGURAL ADDRESS,

in which, after expressing his high appreciation of the honor conferred in electing him president, and speaking of the general scope of the organization, he said that the Society had reached a period of its growth and intellectual activity when better than mere ephemeral work should be presented. Special reference was made to the "collective investigation of disease," a work which had received especial attention in Great Britain. The fields in which inquiries of this character might be extended are as broad as the domain of medicine. One of the most promising fields of labor for combined observation is in the *self* study of disease by medical men. By taking up some subject and studying it in this manner, limiting the inquiry to few questions, and to the profession in this vicinity, much good might result.

The bent of medical thought and teaching for the present is rather pathological and clinical, and he would not say a word to depreciate labor in these directions, but simply throw out the caution that we should not, in too close absorption in the study of local changes of tissue and their clinical manifestations, lose sight of those broader diathetic manifestations which will, from the same apparent cause, produce different diseases in different persons.

The President said that he considered it a part of his duty to continue the good work of the Society of prosecuting illegal practitioners of medicine.

COMMITTEES FOR THE ENSUING YEAR.

At the close of his address, THE PRESIDENT appointed the following committees:

Committee on Hygiene.—Dr. A. Jacobi, Chairman—Drs. E. H. Janes, W. T. Alexander, R. H. Derby, and R. Van Santvoord.

Committee on Ethics.—Dr. Laurence Johnson, Chairman—Drs. W. M. McLaury, J. L. Campbell, Ellsworth Eliot, and E. L. Partridge.

Committee on Prize Essays.—Dr. C. C. Lee, Chairman—Drs. R. F. Weir and T. A. McBride.

Auditing Committee.—Drs. P. A. Morrow and H. P. Farnham.

THE PRESIDENT also referred to the great loss to the profession caused by the death of J. Marion Sims, and appointed Dr. W. Gill Wylie to read a memoir at the meeting in January, 1884.

The paper for the evening was read by Dr. J. LEONARD CORNING,

ON CEREBRAL EXHAUSTION.

We know of an inadequacy of the functional capacity of the motor apparatus dependent upon mal-nutrition of the muscle itself. We are also cognizant of a similar state of things affecting the organ of thought. It is of this impairment—this exhaustion of the functional capacity of the thought mechanism—that I would speak this evening.

Under the designation "cerebral exhaustion" I propose to consider a group of clinical phenomena, the chief feature of which is a morbid limitation of the ratiocinative capacity of the individual consequent upon functional brain disease.

The manifestations of cerebral exhaustion are chiefly comprised under the following headings:

Psychical symptoms: 1, Morbid limitation of the ratiocinative processes; 2, Morbid emotional phenomena; 3, Derangements of memory; 4, Volitional impairment; 5, Evanescent mental confusion; 6, Disorders of sleep—morbid dreams; 7, Lack of mental concentrativeness.

Physical symptoms: 8, Ocular symptoms; 9, Acoustic symptoms; 10, Vaso-motor disturbances and cardiac derangements; 11, Local head pains.

Secondary symptoms, sometimes consecutive to or accompanying the primary exhaustion: 12, Insufficiency of voluntary muscular power; 13, Morbid fears; 14, Lachrymose condition in the male (wrongly designated hysterical); 15, Morbid sexual manifestations.

These were discussed in the order of their clinical occurrence.

DR. PUTZEL said that cerebral hyperæmia and anæmia were rarely found at autopsies, except as produced by some local organic disease, and therefore he could not receive the theory that circulatory disturbances are present in cerebral exhaustion. He also thought ophthalmologists would agree that the condition of the retina could not be called in to sustain the theory. Concerning treatment, he thought no drug had done more harm than bromide of potassium in the condition of neurasthenia. It may allay the symptoms for a while, but it aggravates the cases if continued for a long time. He believed that these factors should not be lost sight of in studying this condition: 1, Hereditary tendency, shown differently in different persons; 2, worry; and 3, general anæmia. Those cases arising from hereditary tendency he doubted if they could ever be cured permanently. He favored the use of arsenic especially.

DR. WEBSTER had examined the retina in several patients suffering from cerebral exhaustion, so called, and had failed to find any marked deviations from the normal.

DR. ROOSA substantially sustained Dr. Webster's experience.

DR. JACOBI said the subject was interesting, not mainly because the brain is not well understood, but because the brain cannot be studied as a specialty. Persons suffering from quite a number of other diseases will suffer from cerebral exhaustion, and therefore the brain condition can be removed by the cure of the original affection. The condition might be one of hyperæmia or anæmia, but he thought it would not be correct to speak of disease of the brain the result of overwork or worry or any such cause. He supposed the speaker meant simply functional exhaustion.

Dr. Corning said he meant that the protoplasm of the cells was affected in some way not now known.

Dr. Jacobi said that so long as we did not know what the character of the change in the protoplasm is, it should be called functional in character, and that view had a special influence on prognosis and treatment. He did not believe that from the condition of the external blood-vessels we could judge of the internal blood-vessels. On the other hand, hyperæmia might exist at autopsy and during life be the attendant of a general anæmia. He regarded cerebral exhaustion as a condition of disturbed nutrition, and therefore both local and general treatment might be beneficial. Dr. Jacobi favored the use of the galvanic current, arsenic, and digitalis.

Dr. A. H. Smith regarded faulty nutrition as the chief factor in these cases, but behind that there was probably a disturbance in the distribution of the blood from vasomotor influences. He also referred to the beneficial effects produced by digitalis.

Dr. E. C. Harwood spoke of the good effects produced by rest, recreation, horseback exercise, fresh air, and life in Switzerland.

Dr. Garrish spoke of the importance of treating the general system and the avoidance of all exciting causes, such as the use of tobacco, etc.

Dr. Corning, in closing the discussion, said he regarded the cardiac trouble as secondary to the condition of the brain, and that treatment directed to the brain would relieve the cardiac symptoms. Of course, in studying these cases organic diseases must be eliminated, and he thought that hyperæmia and anæmia could be demonstrated better in the living subject than at the post-mortem table. With regard to digitalis, it was a remedy which he had used successfully and had recommended in a monograph published about one year ago.

The President presented a certificate of Honorary Membership to Brevet Lieut.-Colonel Bennett A. Clements, Surgeon U. S. Army.

Dr. Jacobi moved that a vote of thanks be extended to Dr. Webster for the faithful discharge of his duties as President. Unanimously carried.

Dr. E. C. Harwood moved that the recommendations contained in the President's inaugural address be referred to the Comitia Minora to report some plan by which they can be carried out. Carried.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our own Correspondent.)

ANOTHER HONOR TO THE PROFESSION—DR. ACLAND, F.R.S., AND NOW C.B.—MEDICAL MEN AT THE CHURCH CONGRESS—EVOLUTION—BRITISH ASSOCIATION FOR ADVANCEMENT OF SCIENCE—A PRAYER-MEETING OF SCIENTISTS—DR. MAUDSLEY'S LATE BLUNDER.

London, November 10, 1883.

Dr. Acland has received the—dignity (shall I call it?) of C.B. If a knighthood was lately declined this lesser distinction seems a very poor one to offer the Oxford Professor and President of the Medical Council. As a kind of titular head of the profession, surely he might have had something as much thought of as the titles so freely given by this ministry to brewers. Mr. Gladstone had better repair this blunder by promoting the doctor to the next grade—K.C.B.

If the Church Congress should follow the precedent set this year of inviting eminent scientists to make communications, the proceedings will probably attract more attention than hitherto. At the late meeting the subject was put before the Congress as perhaps few could have anticipated, a bishop observing that "the attitude of mind which becomes Christian men and women is that of humble recipients of scientific truth."

In reference to evolution, Mr. Le Gros Clark, F.R.S., said, "it must be admitted that evolution has no *present* scientific pretension which can be regarded as admirable, to include man, morally, mentally, or physically, in its vast and varied family. I might even venture further by saying that the early history of man, so far as yet revealed to us by science, might not unnaturally induce in some minds a distrust in a theory which is compelled to rest so much on surmise and possibilities. The failing proof *may* be furnished at some *future* day, and we may await patiently and fearlessly what that future shall unfold." This will suffice for a specimen of statements which were received with satisfaction by the Congress. I quote this speaker as one of our profession whose name will be almost as familiar on your side of the Atlantic as on ours, and I might supplement it by what Prof. Flower, equally well known to you, in his turn said. I refrain from citing the speeches of the clergy in a medical journal, but some of them were characterized by a firm grasp of science.

In other quarters there are indications that the doctrine of Darwin is losing some of its charms for scientists. Some tell us that they accept it as a step to something else. Others find its demands on their credence too great. Your readers know pretty well the opposition it has encountered by such men as St. J. Mivart, Virchow, Wharton Jones, F.R.S., and others. A further indication of uncertainty in scientific minds is afforded by the statements of Prof. Tyndall, who, in the *Popular Science Review*, says that "Evolution belongs to the dim twilight of conjecture. . . . Those who hold the doctrine are by no means ignorant of the uncertainty of their data, and they only yield to it a provisional assent. . . . Long antecedent to his advice I did exactly what Virchow recommends, showing myself as careful as he could be, not to claim for a scientific doctrine a certainty which did not belong to it. . . . I agree with him that the proofs of it are wanting. I hold with Virchow that the failures of proof are lamentable, that the doctrine of spontaneous generation is utterly discredited."

Nevertheless, at the British Association for the Advancement of Science, one of the chairmen spoke of the doctrine as "firmly established," a phrase more easily uttered than justified in the face of the most recent expressions of the most cautious scientists.

Referring to the British Association, I may remind you that next year this great scientific congress is to cross the Atlantic and meet at Montreal under the presidency of Professor Dawson, and this fact again reminds me of a meeting of which you may not have heard, as our newspapers seem to have largely neglected to report it. I allude to an afternoon meeting of members of the Association, convened during the late congress, for the purpose of devotion—in fact, a prayer-meeting called and conducted by scientists of eminence. Four out of six who signed the circular convening this meeting were Fellows of the Royal Society, and the attendance was much larger than might have been anticipated. Principal Dawson himself delivered a memorable address, Dr. Gladstone and Professor Hull took part in the proceedings, and many regard this meeting on the Sunday afternoon as one of the most interesting of the gatherings at Southport. Men of this stamp are, of course, above being scoffed at, and indeed, in this age, few if any of the leading scientists should be classed as scoffers. Most claim to be seekers after truth and the claim is freely admitted.

Dr. Maudsley has attained some repute as an alienist, and his writings have made him more widely known as a materialist of the materialists. His admirers call him "outspoken," others call him flippant, or self-satisfied, or conceited. A recent slip should suffice to moderate his conceit, as it will injure his reputation with scholars. In

proof of an argument he advanced to show that evolution was true, nay that alongside of it there has been going on a process of degeneration, and that this will in the end get the upper hand and rapidly undo all that has been done, he finds evidence *to satisfy him* that we are already on the way back to nothingness in the "egoistic hyperæsthesia" of this age.

Do your readers ask what that is? It is only our present condition as contrasted with the Homeric age. Then we are assured that there was "deep, calm, restrained, and massive feeling, fusing intelligence and activity into whole and universal unity." Brave words, these! and the contrast, the now—what of that? Only "howling displays of self-consciousness" and "shrill outcries of sentimentality" which constitute the "egoistic hyperæsthesia." In proof of this stupendous proposition the only evidence offered by Dr. Maudsley is a poem on the death of Achilles which he has mistaken for Homer, but which we learn was written from a present-day view, a couple of years ago. The author, the Rev. O. Ogle, probably little dreamed that his effusion would pass as the "Blind Bard's" within so short a period of its publication, and if Dr. Maudsley's speculations are generally as devoid of evidence as this, we may wait with equanimity the results of the process of de-evolution which he dates from Homer, and even bear calmly the "egoistic hyperæsthesia" which, according to his forebodings, will shortly transmute man into a much fiercer monkey than the one from which he dates his ancestry.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 17 to November 24, 1883.

MOORE, JOHN, Lieutenant-Colonel. Relieved from duty as Medical Director Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

BACHE, DALLAS, Major and Surgeon. Assigned to duty at Fort Adams, R. I. S. O. 215, par. 5, Department of the East, November 19, 1883.

BROOKE, JAMES, Major and Surgeon. Relieved from duty at Angel Island, Cal., and assigned to duty as Post Surgeon, Presidio of San Francisco, Cal. S. O. 162, par. 1, Department of California, November 14, 1883.

HORTON, SAMUEL M., Major and Surgeon. Leave of absence granted October 20, 1883, extended three months. S. O. 266, par. 7, A. G. O., November 20, 1883.

TOWN, F. L., Major and Surgeon. Until further orders, to perform the duties of Medical Director, Department of the Columbia. G. O. 29, Department of the Columbia, November 8, 1883.

WILLIAMS, JOHN W., Major and Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the Department. S. O. 157, par. 5, Department of the Columbia, November 12, 1883.

APPEL, A. H., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Warren, Mass., and assigned to duty at Madison Barracks, N. Y. S. O. 217, par. 4, Department of the East, November 21, 1883.

COCHRAN, J. J., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Bayard, N. M. S. O. 236, par. 5, Department of the Missouri, November 15, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Adams, R. I. S. O. 216, par. 3, Department of the East, November 20, 1883.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. To report in person to Lieutenant Schwatka, Third Cavalry, aide-de-camp, for temporary duty in connection with the completion of report of recent expedition to Alaska. S. O. 156, par. 3, Department of the Columbia, November 9, 1883.

APPEL, D. M., Captain and Assistant Surgeon. Granted two months' leave of absence. S. O. 68, Division of the Atlantic, November 16, 1883.

MUNN, CURTIS E., Captain and Assistant Surgeon. Assigned to duty at Fort Warren, Mass. S. O. 216, par. 4, Department of the East, November 20, 1883.

WINNE, CHARLES K., Captain and Assistant Surgeon. Relieved from duty at Fort Winfield Scott, Cal., and assigned to duty as post surgeon Angel Island, Cal. S. O. 162, par. 1, Department of California, November 14, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending November 24, 1883.

KENNEDY, STEPHEN D., Medical Inspector. Dismissed the service by sentence of a General Court Martial.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending November 27, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 20, 1883.....	0	32	44	1	51	39	1	0
November 27, 1883.....	0	33	64	2	36	37	0	0
Deaths.								
November 20, 1883.....	0	13	9	1	6	22	0	0
November 27, 1883.....	0	12	7	2	4	16	0	0

THE NEW YORK CATTLE QUARANTINE.—The United States Government has bought forty acres of land at Garfield, N. J., having in view the establishment of a quarantine station to which all foreign cattle arriving in the port of New York are taken. If the animals, however, are found suffering from any fatal contagious disease, as lung plague, rinderpest, or aphthous fever, they must not be admitted to the regular quarantine, but quarantined elsewhere. The cattle seemingly free from all infectious diseases are taken to the Garfield grounds with great care, every precaution being taken to avoid any risks of spreading a disease. Only cattle arriving by the same ship may be quarantined in the same yard, and the rules require that all gates of yards shall be kept locked when cattle are entering or leaving the quarantine grounds. A veterinary inspector has general supervision and reports to the Treasury Cattle Commission the appearance of any contagious disease. As a further precaution the manure is quarantined for three months after the cattle have served their ninety days and then removed from the grounds.

THE USE OF CLEAN AIR IN THE COMPRESSED-AIR CHAMBER.—Dr. Arthur J. Wolff, of Hartford, Conn., writes: "I notice in THE RECORD of October 6th, an extract from a letter of Prof. J. Solis Cohen, of Philadelphia, which is certainly very unfair, to say the least. Does it become us to rest satisfied because our patient is breathing impure air in his environments, to force the same and dirtier air down his throat? Let the doctor well understand me before he shoots in his pseudo-overwhelming criticism. I claim from my observations on this matter, that the chamber, as at present used, concentrates all the matters contained in the air into a

small space; it removes all the living particles from currents (a very important consideration), supplies them with moisture and the necessary pabulum for their nutrition and increase; in other words, it makes contaminated air more contaminated. The limited area contains in it every favorable circumstance for the proper development and multiplication of any disease-germs contained in the atmospheric air, which, if used unsterilized from the consulting-room, will, after the lapse of a few hours, be found to contain a far greater number of microbes than could be formerly demonstrated by the microscope. Had the doctor thought a moment, he would not have condemned the sterilizing of the air, if for no other purpose than that of cleanliness. If his mode of reasoning is correct we may as well advocate the use of unclean instruments when we are going to operate on an unclean individual, because, forsooth, cleanliness around and about him 'is superfluous;' or because a patient is breathing infected air, and is in contact with septic matter, antiseptic precautions in the treatment of his wounds are superfluous. A reference to the doctor's very valuable work on 'Throat Affections,' will show the pathological importance to which attaches the inhalation of certain disease-germs, and yet he asserts that the use of absolutely clean air is unnecessary, because the individual is surrounded by and breathing in an impure atmosphere. Now, sir, I hold that there is a vast difference between breathing this air, and forcing the same down the throat and into the lungs of a patient suffering already with inflammatory trouble, and when, as I have found, the same is much dirtier than ordinary air, I am not surprised that the spray has often led to an increase of the throat disease. Let me ask Dr. Cohen if he has ever found strict precautions as regards cleanliness a 'superfluity?' and if he answers in the affirmative (as his letter would imply), we will then grant the justice of his criticism. If the use of clean air in the compressed air-chamber 'be superfluous,' we may as well cancel all the advances and improvements made by modern medical and surgical science in that direction as being also superfluous."

Typhoid Fever in Allegheny City.—Dr. D. N. Rankin gives, in the *Pittsburg Medical Journal* for October, 1883, an account of the origin of an epidemic of typhoid fever recently prevalent in Allegheny City. There were in all forty cases scattered through three different wards. The physicians were at first disposed to attribute the cause of the disease to foul emanations from dumping-grounds in the vicinity, but it was finally suggested that every family in which typhoid fever had occurred was supplied by the same milkman. When this fact was made known to the physician of the Board of Health of the city, he at once inspected the premises of the milkman, and found the following state of affairs: The dwelling and stable were on the side of a hill, the well from which the water for his family as well as for the cows was obtained being about fifty feet from the privy vault, which is higher up the hill than the well. The privy vault was full. There was at the time of the investigation, and had been for several weeks, a case of typhoid fever in the house. Examination of the well water showed that it was contaminated with organic matter of animal origin and many living organisms. There would seem to be little doubt, therefore, that the typhoid infection was spread by the milk.

Successful Case of Chloroform Narcosis during Sleep.—Dr. A. W. Hurd, house physician to the Alms-House Hospital, Blackwell's Island, sends the following: "The recent adverse testimony in the 'chloroform narcosis during sleep' question leads me to report a case under my observation. As one affirmative case has much more weight than a number of negative ones, I think this will prove of interest, especially as there can be no doubt of the completeness of the anæsthesia in this instance. October 5th, a man, seventy years of age, a coalheaver by occupation, was admitted to the hospital with severe contusion of left forearm and elbow, and a subclavicular dislocation of humerus. He appeared partially demented, gave a very indefinite history of his injury, and resented vigorously any attempts either at examination or reduction. So violent was he that it was decided to induce anæsthesia during sleep if possible, and attempt reduction. About two hours after falling asleep in the evening, chloroform was administered on a handkerchief held about ten inches from his face at first. He breathed quietly, and made not the slightest sign of disturbance. The handkerchief was brought gradually nearer, and when he seemed fairly unconscious ether was substituted for the chloroform. The change did not disturb him, except to cause a slight alteration in the rhythm of his breathing for a moment. With the assistance of Drs. Herrick and Winstock the dislocation was then reduced, but with difficulty, the examination revealing the presence of numerous adhesions. The dislocation was evidently of older date than the contusion, while we thought it probable that they were both acquired at the same time. The manipulation required at least fifteen minutes, and rotation was resorted to, to break up the adhesions—the dislocation finally being reduced. The patient came out from the influence of the ether in about ten minutes. The completeness of the anæsthesia is unquestionable, as the manipulations were such as would be very painful to a conscious person. The ease with which the anæsthesia was obtained, and the thoroughness of the test of its genuineness seem worthy of note as opposed to the number of unsuccessful cases recently published, accompanied by a criticism that the tests ordinarily employed were insufficient."

The Lily of the Valley in Homœopathy.—"Some Western homœopaths," says The Medical Record, "have got hold of *convallaria*, and having read all that scientific medicine has to say about it, are quietly appropriating the drug themselves." The first knowledge we obtained of this drug was from Dr. John F. Gray, who used it for many years in heart troubles, and we believe was the first to introduce it to the profession. The new school has a habit of reading all that scientific medicine has to say of a drug, and quietly appropriating the facts. We are glad that some of the old school are following their example.—*New York Medical Times.*

Concerning Cramming for Examination.—A correspondent from the Navy writes: "The question of 'cramming' and frequent examinations which have occupied the attention of Dr. Shufeldt, Professor Coues, and others, excites no little interest among our English cousins. The testimony of Mr. Walter Wren, 'the eminent crammer,' and of numerous correspondents of the *Times*, has shown up these matters in a true light, and it is evident that we have not a monopoly of 'superficial education.' There is a very general belief in England that there is too much 'cramming' in the public and private schools, and at the universities; and that knowledge will be found in inverse ratio to the cost of education. As with us, too much is attempted in too short a time, and a mere '*smattering*' is the result. This is the history of our private and public schools, Annapolis and West Point. A writer in the London *Times* states that he crammed his son on subjects of which he knew literally nothing, 'and so stuffed him that he passed easily' a rigorous examination. He tried him again shortly after, and found 'his mind had returned to its original vacuity.' In the United States Navy, examinations are carried to a ridiculous extent, one for each grade (except in the engineer corps, where it would appear the most important) and the result by no means justifies the loss of time, vexation, and expense incurred. The profession of physic no doubt needs students better prepared academically, and *professional* examination made by or under the supervision of a supreme medical council. Diplomas and licences should be granted by this body, and not by interested college faculties. In Government

departments a very *rigorous* entrance examination should be required, and a second examination at the end of five or ten years may be needed to determine the advance or improvement of an officer in his professional studies, or better still, a post-graduate or polyclinical course should be insisted upon; but as a man is 'either a fool or a physician at forty,' it is absurd to examine men at fifty or sixty years of age, to test their *practical* skill or ability."

Doctors on Marriage.—Dr. Clifford Allbutt, in a recent address, says: "In matters of wider bearing—in the larger social and political questions—we shall do well, as Bacon says, 'not to usurp a kind of dictature in sciences, nor with over-confidence to pass censure upon matters in doubt, nor to give way to peremptory fits of asseveration.' All professions, not one only, tend to put on the priesthood, if not checked by conflicting authority; to give themselves airs, in short. A doctor's one idea being very properly a sound body, he proclaims that, if he were king, no members of a family tainted with consumption or insanity should marry; as if the frail tenements which held the spirits of Keats, or of Elia, of Arthur Hallam, or of W. K. Clifford, bore not freights more precious than a wilderness of cricketers. To come nearer home: Addison was one of the ablest teachers the art of medicine ever knew; now Addison was bred of insane blood, and died by his own hand. Who are we who pretend that we can lose such lives as these, or who deny that their genius drew any quality from the instability of their blood? Our answer to questions of this kind is to point out the dangers clearly, and wherein they lie, or increase; but not to claim alone to bind or loosen, nor to measure all things with our own foot-rule. Even in lower matters, where we see more clearly, as in sanitary questions, we cannot drag people blindfold."

A French Surgeon's Views of American Women.—M. Poncet, a surgeon of Lyons, France, has been travelling in this country and has recorded some of his impressions in the feuilleton of the *Lyon Médicale*. His observations upon the anatomy of American women possess some novelty. He is quoted by the *Boston Medical and Surgical Journal* as follows: M. Poncet "is struck by a certain similarity of conformation between the women of the 'New World' and those of 'blonde Albion,' both are deficient in '*pectus*,' the mammary glands are but little developed, or there is at least a want of harmony between the size of those organs and the general figure. The upper part of the body, apart from the head, which is often very expressive, sometimes extremely beautiful, is disappointing in volume. The pelvis and the lower limbs, on the other hand, he finds well developed. This disproportion frequently struck the writer at the hospitals. He concludes that the German transplanted to the United States will become less productive, and in this respect more and more like the native American."

We would like to ask Dr. Poncet how about the *pectus* of the French women? According to statistics, the French birth-rate is the lowest of any nation. Therefore, if the French women have a gratifying mammary development, it is not a result or evidence of fecundity.

The Use of Carbolized Sawdust as an antiseptic surgical dressing is advocated by Mr. H. P. Symonds in *The Lancet*. He says: "One of the drawbacks of the usual antiseptic dressing is the rapidity with which the discharges come through on the first day or two after operation, often necessitating the redressing of the case within a few hours. To prevent this, and yet not to interfere with the aseptic condition of the wound is a distinct advantage both to the patient and the surgeon. The material I have used recently in a considerable number of cases is coarse sawdust, soaked in (one in ten) solution of absolute phenol and spirits of wine, then allowed to dry slightly so that the spirit may evaporate, leaving the sawdust charged with carbolic acid. When used it is enclosed in a bag made of several layers of gauze, and applied outside of the deep dressing, the usual external dressing being put over it. The sawdust thus takes the place of the padding of loose gauze which is generally used. Its absorbent power is very great, and it has the additional advantage of keeping up an equable pressure on the divided tissues. Fourteen ounces of sawdust will readily absorb about one pint of fluid. He reports five cases, taken without any selection, in all of which complete primary union took place without any formation of pus. The three points in its favor are its powerful antiseptic qualities when saturated with carbolic acid, its great absorbent power, and its adaptability to any surface. The sawdust should be coarse, as it passes through the gauze when very fine and irritates the skin."

The Study of Insanity as Part of the Medical Curriculum.—The obligation of medical men to be examined in the treatment of insanity has been a subject of discussion in the German Legislature, and the question has been decided in favor of the omission of the proposed test. Certain sections of the medical press in Germany have, however, expressed the opinion that the connection between mental and corporeal disease is in some instances so close that the physician would gain by having at his command a special knowledge of the subject in question. The hope is expressed, says *The Lancet*, that in the interest of their professional skill young doctors will not avail themselves of the step which the government has taken, but will devote attention to mental diseases and their treatment.

M. Poncet on the American Method of Living.—Dr. Poncet, of Lyons, France, gives the following Gallic account of the way we live: "If there is any truth in the proverb, 'Tell me what you eat, and I will tell you what you are,' it is amply illustrated in the New World. The American does not eat, he simply fills himself; his sole desire is to satisfy hunger, and if he can secure quantity, quality is of little importance; hence one frequently sees him ingest a lot of food standing up, or scarcely seated, at a counter. There are fixed hours between which meals may be had, and food must be taken at those times whether one be hungry or not. A despotic, all-powerful public opinion, which no one dares defy, decrees the hours for eating. The meals are always begun with a square block of rancid butter, having an odor of margarine. A pause of fifteen to twenty minutes gives time to attempt the digestion of this compound, and then you find yourself surrounded by a variety of little dishes which you expressed an intention to eat. It matters not that they become cold, for do you not see around you 'des misses, des ladies, des gentlemens' eating watermelon with chicken, and currant jelly with cutlets and salad! Behind your chair is one negro who fans you, and another who puts ice in your glass." The writer apparently was not struck with the number of our religions, but it does not escape him that we have but one sauce, and that like glue, by which otherwise good meats are ruined. Our eggs have a queer, stale, animal flavor, which is supposed to result from the hens being fed upon meat that they may lay more. Corn is a favorite article of food, and though eaten in various ways, is most often boiled on the cob. Three or four of these cylinders are not too much for a lover of this cereal, who will gnaw off the grains with his teeth, and presently leave nothing but "*la carcasse*."

A People without Consumption.—A paper was read recently before the Tennessee Medical Society with the title, "A People without Consumption, and some Account of their Country." The country in question is the Cumberland plateau. The writer, Dr. Wright, has practised in the region throughout a generation, and in his assertion of fact touching the entire absence of consumption he is supported by the testimony of about twenty other physicians of standing.—*Medical and Surgical Reporter*.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 23 NEW YORK, DECEMBER 8, 1883 Whole No. 683

CEREBRO-SPINAL FEVER.

BY J. LEWIS SMITH, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Continued from p. 590.)

CASES seen by the writer, chiefly during the last five years. Those in the epidemic of 1872 not in the list. The symptoms commonly present, as vomiting, headache, neuralgic pain in trunk and limbs, retraction of head, rigidity of posterior cervical and other muscles, the temperature and pulse, though recorded in my notes, are omitted in the table, unless they presented unusual features. The duration is reckoned, in those who recovered, to the time when they could stand or walk, though with difficulty.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
1	Male.	10 months.	Sudden; no prodromes.	Eclampsia on first days; retraction of head and muscular rigidity 4 weeks.	6 months.	Recovery.
2	Male.	3 years.	" " "	Internal strabismus of right eye; dangerously sick 7 weeks.	9 weeks.	Recovered, except strabismus which is permanent.
3	Female.	2 years.	" " "	Eclampsia; coma.	9 days.	Died.
4	Male.	30 years.	" " "	Delirium; coma.	5 days.	Died.
5	Male.	22 years.	" " "	Herpes around mouth.	8 weeks.	Recovered.
6	Female.	4 years.	" " "	Chilliness; great pallor at first; delirium, great restlessness, convulsions, and coma.	6 days.	Died.
7	Male.	2 years, 2 months.	" " "	Vomiting at intervals for 7 weeks; head so retracted that finger could with difficulty be pressed to nucha; had constipation and strabismus; usually lay with eyes shut and screamed when disturbed; feet and legs usually cool from the second to the tenth week; much emaciated.	Temporary abatement of symptoms in the third week so that he played for a few hours, followed by a full relapse. Began to stand and walk with a tottering gait on the sixteenth week.	Recovered.
8	Male.	20 months.	Rather languid on previous day, but played.	Began with clonic convulsions and high febrile movement at night; convulsions at 5 A.M., 12 M., and 3 P.M.; appeared dying, and deglutition impossible on the first day; deglutition again impossible during the three days before death.	25 days.	Died comatose.
9	Female.	3 years.	Vomited and seemed sick after a slight punishment on June 11, 1882, on the 12th was better, had some appetite and went out. On the 13th cerebro-spinal fever began with a temperature of 103°.	The muscular rigidity became less after the twelfth day; lost speech on the second day, and was unable to articulate for 2½ months; strabismus; *tache cerebrale.*	Was in bed 2½ months, unable to stand or walk; when recovering and fully conscious, made frequent attempts to speak, but without any sound. Finally articulated slowly, and the easiest monosyllables.	Recovered, but after 1 year speech slow and lisping; gait unsteady and hands tremulous; easily fatigued; is very sensitive and cries often.
10	Male.	28 years.	Ate heartily at 12 M. on April 23, 1883, and at 1 P.M. had a chill; vomited severely, and had intense headache; minute red points in face after vomiting, from capillary extravasations. On April 24th, vomiting and headache ceased and he remained well till the 26th. Went to Brooklyn on the 25th. On the 26th pains commenced in head, back, and limbs, with febrile movement.	Had general convulsions on April 30th, lasting 10 or 15 minutes; could walk in the sickness, but with tottering gait, and always had some appetite.	Left the house in five weeks, but a glass of beer or other stimulant caused renewal of headache, which during the sickness had been oftenest in the occiput, though it was frequent in other parts of the head.	Recovered.
11	Male.	6 years.	Previously well and the day before very cheerful.	Head retracted two weeks.	Began to walk in the fourth week, and progressively improved.	Recovered.
12	Male.	3 years, 8 months.	Was punished, though not severely, and soon after cerebro-spinal fever began with febrile movement and convulsions.	Opisthotonos, and retraction of head 10 weeks; greatly emaciated; could not speak for three months; apparently could not hear at first or was too unconscious to notice sounds.	3 to 3½ months.	Recovered.
13	Male.	10 years.	Sudden, in school.	Muscular rigidity with retraction of head; great emaciation; ulceration of cornea.	9½ weeks.	Recovered.
14	Female.	9 years.	Sudden; no premonition.	Vomiting; marked opisthotonos.	10 weeks, but fainted on slight exertion for months afterward.	Recovered.
15	Female.	11 months.	" " "	Eclampsia; apparently did not notice objects during the first month.	9 weeks.	Recovered.
16	Female.	12 years.	" " "	Great emaciation; had occasional neuralgic pains for eighteen months after convalescence.	6 weeks.	Recovered.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
17		10 months.	Sudden; no premonition.	Inability to swallow; drinks passing into the larynx; abundant secretion on faucial surface without redness.	2 days.	Died.
18	Male.	2 years.		No vomiting.	3 days.	Died.
19	Male.	6 months.	Bottle-fed; had been fretful, but immediately before disease began seemed well.	Had convulsions, the mother says as many as fifty.	10 days.	Died.
20	Male.	11 years, 5 months.	Had diarrhœa two days previously, but otherwise in usual health; attended school on day when sickness began, and returned home in the afternoon with a chill with which disease began.	Eclampsia on the fourth day; pulse 169, temperature 105°; pupils widely dilated and not responsive to light.	4 days.	Died.
21	Female.	2 years, 3 months.	Sudden.	Had paresis of all the limbs; when convalescing, inability to support the head and shoulders erect; rests them often upon the sofa or the mother's lap.	Began to stand in 4 weeks.	Recovered.
22	Male.	10 months.	Sudden.	Left pupil larger than the right; partial paralysis of left leg, complete of right.	.....	.....
23	Female.	12 years.	Came from school crying with pain in top of head, in knees and calves of legs and with dizziness.	On second day intense frontal headache; left pupil larger than the right, numerous spots over entire body; mild conjunctivitis of right eye; third, right pupil larger than left, the reverse of yesterday; fourth day, dysphagia, left pupil much contracted, right pupil dilated; eighth day, right eye hyperæmic, as if from general inflammation; ninth, delirious; tenth, sees indistinctly with right eye, and objects yellow. Improved for a time and then became worse, the mother thinks from imprudence in her diet; right eye totally destroyed and its parts indistinguishable; no headache in last five days of life.	4½ weeks.	Died.
24	Male.	10 months.	Began suddenly with vomiting.	Eclampsia in second week; very fretful; eyelids usually closed; when aroused only partly raises upper eyelids; oscillation of pupils; finally no response to light and total blindness, although the appearance of the eyes was good; fingers firmly flexed at times; after abatement of the fever almost constant choreic movements of arms except in sleep. Four months after disease began, temperature 99¼°, pulse 136; eyes prominent and bright, though sightless till death.	Never able to stand but lived 10 months.	Died of diphtheria at age of 20 months.
25	Male.	4½ years.		Head retracted 4½ months, and patient in pain whenever moved during most of this time; greatly emaciated and prostrated.	Was in bed, unable to stand, 5½ months.	Recovered fully.
26	Female.	23 years.	Sudden with great headache.	Symptoms severe from the first; soon lost consciousness; removed to hospital on the sixth day.	11 days.	Died in coma.
27	Female.	4½ years.	Gradual.	No retraction of head; vomited, but not at first.	4 weeks.	Recovered, but with diverging strabismus & imperfection of sight.
28	Male.	4 years.	Sudden.	Pupils widely dilated, insensible.	1 week.	Died.
29	Male.	16 months.	Sudden.	Had pneumonia of the right lung, beginning on the third day with rise of temperature to 103⅗°.		Recovered.
30	Male.	7 months.	Sudden.	Frequent attacks of eclampsia during first week, unilateral, and usually short. Twice they occurred on the left side, but at other times on the right side; eclampsia followed by paralysis of right extremities and left side of face, it gradually passed off; right pupil larger than left; choreic movement of eyes; strabismus; in the second month temperature subnormal.	.....	Recovered with loss of sight; and perhaps blunted intelligence.
31	Male.	11 months.	Diarrhœa previously.	Eclampsia nearly constant for 24 hours; during the first four days pulse scarcely appreciable; inability to swallow; total unconsciousness; case apparently hopeless and near death; temperature, 105° to 106°; pupils did not respond; gradually improved after the fourth day.	Taken sick upon the shipping in Hudson River; removed to Jersey City on the eleventh day and lost sight of.	Probable recovery.
32	Male.	5 years, 1 month.	Sudden.	A chill followed by eclampsia on the first day; highest temperature, 106°, was on the first day; moaning and restlessness in the commencement. Great emaciation when a few weeks sick.	At 8 weeks could sit in bed; could stand a few weeks later.	Complete recovery.
33	Male.	10 weeks.		Had eclampsia; fretful; constipation with vomiting; temperature, 100°; head retracted.	9 days.	Died; autopsy.
34	Female; mulatto (Infant Asylum).	23 years.	Delivered of a healthy child August 6, 1881; convalesced satisfactorily; sickened with cerebro-spinal fever August 30th.	Intense headache; delirium, coma, strabismus; paralysis of right side of face.	3 days.	Died.

No.	Sex.	Age.	Mode of commencement.	Unusual or noteworthy symptoms.	Duration.	Result.
35	Male.	32 years.	Had typhoid fever three months previously; cerebro-spinal fever began suddenly after much mental excitement and worriment.	No elevation of temperature in first and second days; great pain in lower part of sacrum.	13 days.	Died.
36	Male.	9 years, 7 months.	Taken sick in school.	Eclampsia four days in the beginning; semi-coma in first weeks of disease; full consciousness and return of appetite in last part of sickness; great emaciation. Through negligence in nursing had three large bed-sores, extending to the bones, and suppurating abundantly.	18 weeks.	Died apparently from the bed-sores, one over the sacrum and one over each hip.

Pulse.—This is usually accelerated, and the more severe and dangerous the attack, the more rapid the heart's action, except occasionally in the comatose state, when probably, in consequence of compression of the brain from an abundant exudation, the pulse may be subnormal. Thus, in one of my patients, an adult, the pulse fell to 40 per minute, and in two others between 60 and 70 per minute. With the exception of these three patients, the pulse in all cases which I have observed, so far as I recollect, has varied from the normal number of beats per minute to such frequency that it was difficult to count it. As death draws near the pulse ordinarily becomes more frequent and feeble. Intermissions in the pulse do not seem to be as common as in other forms of meningitis, but marked variations in its frequency during different hours of the day, and on consecutive days, is a conspicuous symptom. Thus, in a case which was fatal in the fifth week, consecutive enumerations of the pulse, in the acute stage, were as follows, 128, 120, 88, 130, 84, 112.

Temperature.—Some of the older writers, before the days of clinical thermometry, stated that the temperature is not increased. North remarked as follows: "Cases occur, it is true, in which the temperature is increased above the normal standard, but these are rare," and Foot and Gallop make similar statements. Some recent writers have held the same opinion. Thus Lidell wrote as follows in a treatise bearing the date of 1873: ". . . . Febrile symptoms do not necessarily belong to epidemic cerebro-spinal meningitis, as a substantive disease, for it may, and not infrequently does occur, without exhibiting any such symptoms." We would naturally expect that meningitis, accompanied as it is by active congestion of the brain and spinal cord, would produce more or less fever, and in eighty-six cases, which I have examined by the thermometer, I have found elevation of temperature in every case during the acute stage, except in the beginning of the attack in two instances. In a young man, aged twenty-eight years, who had severe headache and seemed seriously sick, the thermometer under the tongue showed no rise of temperature on the first and second days, but on the third day it was at 100°, and it remained elevated till his death, on the thirteenth day. The second case was that of a young woman whom I saw in consultation, and who at the time of my visit had decided febrile movement, but who, like the young man, had no rise of temperature on the first and second days, according to the careful observations of the attending physician. In the eighty-six cases which I have examined, the heat of the surface occasionally did not seem above normal to the touch, and now and then the thermometer, applied in the axilla or groin, did not indicate fever, but the rectal temperature was always elevated above that of health after the disease was fully established. The temperature fluctuated from day to day, and in different hours of the same day, but there was no exception after the second day to the rule, that it is supra-normal during the active stage of the malady. Sometimes the elevation of temperature was slight, as in a female patient, forty-seven years of age, whom I was allowed to examine with the family physician. The thermometer showed no elevation of temperature when it was placed in the mouth and axilla, but on introducing it into the rectum it rose to 99½°.

The highest temperature which I have thus far observed, was 107⅘°, in a child aged two years. This was in the commencement of the attack. Subsequently it fell a little, but rose again on the third day to 107°, when she died. In two other cases the temperature was 106° on the first day, and it did not afterward reach so high an elevation. One of these died on the ninth day, and the other in the ninth week. The next highest temperature was 105⅘°, also on the first day, in an infant aged eight months, who died on the ninth day. The first and last of these cases occurred in an old wooden tenement-house in the suburbs of the city, and upon an elevated outcropping of rock. The highest temperature in any case in New York City which has come to my notice, was observed in a male patient aged twenty-eight years, who had active delirium and died on the fifth day in Roosevelt Hospital. The temperature on the last day, taken four times, was as follows, 102½°, 106¾°, and when the pulse had become imperceptible, 109° and 107¾°. Wunderlich has recorded a temperature of 110° in one or two cases, but so great an elevation must be very rare, and is, of course, prognostic of an unfavorable ending.

The external temperature undergoes still greater fluctuations than the internal, rising above and falling below the normal standard several times in the course of the same day. Similar fluctuations occur in other forms of meningitis, but they are, according to my experience, less pronounced than in cerebro-spinal fever, especially as I observed them in the epidemic of 1872. Perhaps since that epidemic they have been less marked in the cases occurring in this city. The more grave the attack in those not comatose, the greater these variations. The following is a common example, in a patient aged two years. Without any notable change in other symptoms, the internal temperature varied from 101° to 104⅘° as the extremes, while that of the fingers and hands at the first examination was 90½°, at the second 90°, at the third 103°, and at the fourth 83°. Hence at the third examination the temperature of the extremities had risen 13°, so as nearly to equal that of the blood, and at the fourth examination it had fallen 20°. The patient recovered. These great and sudden variations in the pulse, and the internal and external temperature, have considerable diagnostic value in obscure and doubtful cases.

Respiratory system.—This system is not notably involved in ordinary cases. Intermittent, sighing, or irregular respiration appears to be less frequent than in ordinary meningitis, but it does occur. In most patients the respiration is quiet, but somewhat accelerated, and without any marked disturbance in its rhythm. In thirty-one observations in children who had no complication, I found the average respirations 42 per minute, while the average pulse was 137. Therefore the respiration, as compared with the pulse, was proportionately more frequent than in health, due perhaps to the fact that certain muscles concerned in respiration, as the abdominal, are embarrassed in their movements by tonic contraction.

Various observers, in different epidemics, have recorded an unusual prevalence of croupous pneumonia occurring

simultaneously with the cerebro-spinal fever. Bascome in his history of epidemics stated that "epidemic encephalitis and malignant pneumonias prevailed in Germany in the sixteenth century" (Webber). Webber in his prize essay describes a variety of cerebro-spinal fever, which he designates pneumonic, in which the cerebro-spinal axis is involved but slightly or not at all, and the brunt of the disease falls upon the respiratory organs. According to him, in certain epidemics the pneumonic form has been common and in others infrequent.

In New York City, during the epidemic of cerebro-spinal fever in 1872, pneumonia was also unusually prevalent, affecting many old as well as young people. According to the statistics of the New York Board of Health, seventeen hundred and seven deaths from diseases of the respiratory organs, exclusive of phthisis, occurred during the four months from February 1 to June 1, 1872, when the epidemic of cerebro-spinal fever was at its height, and only thirteen hundred and thirty-six deaths occurred from the same diseases during the remaining eight months of the year; and as phthisis is excluded, the only other disease of the respiratory system besides pneumonia, which causes a large mortality is membranous croup, which did not seem to be unusually prevalent during those four months. It is therefore probable, though not distinctly stated in the annual report of the Health Board for that year, that the great mortality from diseases of the respiratory organs, during that part of 1872 when cerebro-spinal fever was epidemic, was chiefly from pneumonia, and, according to my observations, many cases of pneumonia during that period presented symptoms of greater gravity than usually accompany this form of inflammation. The patients were greatly prostrated from the first, and in some of them febrile movement, muscular pains, restlessness, or delirium preceded for hours or even days the pneumonic symptoms, affording evidence that the lung disease occurred under certain unusual circumstances or conditions which modified its character. It is not improbable therefore that Webber's view is correct, that there are occasional cases of cerebro-spinal meningitis with pneumonia as one of its local manifestations. In the New York epidemic of 1872 a prominent citizen had a severe attack of what was supposed to be cerebro-spinal fever, one of his medical advisers being known throughout the country for his ability in diagnosis. On the sixth day the cerebro-spinal symptoms considerably abated, pneumonia appeared, and subsequently the prominent symptoms were referable to the lungs. He slowly recovered.

Cutaneous surface.—The features may be pallid, of normal appearance, or flushed in the first days of the disease, but in advanced cases they are pallid, as is the skin generally. A circumscribed patch of deep congestion often appears, as in sporadic meningitis, upon some part of them, as the forehead, cheek, or an ear, and after a short time disappears. The hyperæmic streak, the *tache cérébrale* of Trousseau, produced by drawing the finger firmly across the surface, also appears as in other forms of meningitis, if the temperature of the surface be not too much reduced.

The following are the abnormal appearances of the skin most frequently observed: 1. Papilliform elevations, the so-called goose-skin, due to contraction of the muscular fibres of the corium. This is not uncommon in the first weeks. 2. A dusky mottling, also common in the first and second weeks in grave cases, and most marked where the temperature is reduced. 3. Numerous minute red points over a large part of the surface, bluish spots a few lines in diameter, due to extravasation of blood under the cuticle, resembling bruises in appearance, and large patches of the same color, an inch or more in diameter, less common than the others, of irregular shape as well as size, and usually not more than two or three upon a patient. These last resemble bruises, and they may sometimes be such, received during the times of restlessness; but ordinarily extravasations of this kind result entirely from the altered state of the blood. In New York, in the epidemic of 1872, they were common, but since this epidemic, in the thirty-six cases which I have observed, I have rarely seen either the reddish points or the extravasations of blood. They were probably common in the epidemics in the first part of this century in this country, since the disease was designated by the name spotted fever by the American physicians who wrote upon it at that time. That they are unusual in the European epidemics at the present time, we infer from the fact that Von Ziemssen expresses surprise that the disease should ever have been designated in America by such a title. 4. Herpes. This is common. It sometimes occurs as early as the second or third day, but in other instances not till toward the close of the first week or in the second. The number of herpetic eruptions varies from six or eight to clusters as large or larger than the hand. This cutaneous disease evidently has a nervous origin, the vesicles occurring in most instances on those parts of the surface which are supplied by branches of the fifth pair of nerves. Its most common seat is upon the lips, but occasionally it appears upon the cheek, upon and around the ears, and upon the scalp. Erythema and roseola fugitive skin eruptions occasionally appear, and in one instance in my practice erysipelas occurred. During the first days the skin is apt to be dry; afterward perspirations are not unusual, and free perspirations sometimes occur, especially about the head, face, and neck.

Urinary organs.—In other forms of meningitis it is well known that the quantity of urine excreted is apt to be diminished, but in this disease it is usually normal, and it may be more than normal. Polyuria has been noticed in different cases by various observers. Mosler observed a boy aged seven years, who had an excessive secretion of urine, which dated back to an attack of cerebro-spinal fever in his third year. The polyuria is probably due to injury of the nervous centre, since it is established by physiological experiment that irritation of the central end of the vagus, of certain parts of the cerebellum, and of the walls of the fourth ventricle, sometimes produces this effect. The urine occasionally contains a moderate amount of albumen, and in exceptional instances cylindrical casts and blood-corpuscles.

Arthritic inflammation, apparently of a rheumatic character, has been occasionally observed. It is commonly slight, producing merely an œdematous appearance around one or more joints. Thus in one case which came under my notice, and which was subsequently fatal, the parents, who were poor, and were therefore without medical advice till the case was somewhat advanced, had already diagnosticated rheumatism on account of the puffiness which they had noticed around one of the wrists.

The special senses.—Taste and smell are rarely affected, so far as known, but it is possible that they are sometimes perverted, or even temporarily lost, during the time of greatest stupor. In one case, which I saw, the sense of smell was entirely lost in one nostril, and I do not know whether it was ever fully restored.

The affections of the eye and ear are important and of frequent occurrence. Strabismus is common. It may occur at any period of the fever, continuing a few hours or several days, and it may appear and disappear several times before convalescence is established; occasionally it continues several weeks, after which the parallelism of the eyes is gradually and fully restored. In other instances it is permanent. Thus in a boy of five years, whom I last saw three months after convalescence, there was still convergent strabismus of the right eye, and double vision; and in a boy of three years, convergent strabismus of the right eye remained when I examined him twelve months after the occurrence of the fever.

Changes in the pupils are among the first and most noticeable of the initial symptoms, as I have already stated in describing the mode of commencement. These

are dilatation, less frequently contraction, oscillation, inequality of size, feeble response to light, etc. Most patients present one or more of these abnormalities of the pupils, and they continue during the first and second weeks, and gradually abate, if the course of the disease be favorable. Inflammatory hyperæmia of the conjunctiva often occurs. It begins early, and now and then the conjunctivitis is so intense that considerable tumefaction of the lids results, with a free muco-purulent secretion. The false diagnosis has indeed been made of purulent ophthalmia, in cases in which this affection of the lids was early and severe. But such intense inflammation is quite exceptional. More frequently there is a uniform diffused redness of the conjunctiva, not so dusky as in typhus, and the injected vessels cannot be so readily distinguished as in that disease.

In certain cases almost the whole eye (all indeed of the important constituents) becomes inflamed; the media grow cloudy, the iris discolored, and the pupils uneven and filled up with fibrinous exudation. The deep structures of the eye cannot, therefore, be readily explored by the ophthalmoscope, but they are observed to be adherent to each other, and covered by inflammatory exudation. They present a dusky red, or even a dark color, when the inflammation is recent. Exceptionally the cornea ulcerates and the eye bursts, with the loss of more or less of the liquids, and shrinking of the eye. "But ordinarily no ulceration occurs, and, as the patient convalesces, the œdema of the lids, hyperæmia of the conjunctiva, the cloudiness of the cornea and of the humors, gradually abate, and the exudation in the pupils is absorbed. The iris bulges forward, and the deep tissues of the eye, viewed through the vitreous humor, which before had a dusky red color from hyperæmia, now present a dull white color. The lens itself, at first transparent, after awhile becomes cataractous. Sight is lost totally and forever. This form of ophthalmia is sometimes rapidly developed, as in the following example:

On July 5, 1873, I was called to a boy, five years of age, who had reached the tenth day of cerebro-spinal fever without apparently any affection of the eyes, as both presented the normal appearance. On the following day the left eye was red and swollen from the inflammation and chemosis, so that the lids could not be closed, and the media were cloudy. Death occurred on the same day.]

If the patient live the volume of the eye diminishes, as the inflammation abates, to less than the normal size, even when there has been no rupture, and escape of the fluids, and divergent strabismus is apt to occur. Professor Knapp, whose description of the eye I have for the most part followed, says: "The nature of the eye affection is a purulent choroiditis, probably metastatic." Fortunately so general and destructive an inflammation of the eye as has been described above is comparatively rare. On the other hand, conjunctivitis of greater or less severity, and hyperæmia of the optic disc, consequent upon the brain disease, are not unusual, but they subside, leaving the function of the organ unimpaired. "In some cases incurable blindness is noticed under the ophthalmoscopic picture of optic-nerve atrophy, probably the sequence of choked disc" (Knapp).

Inflammation of the middle ear, of a mild grade, and subsiding without impairment of hearing, is common. The membrana tympani, during its continuance, presents a dull-yellowish, and in places a reddish, hue. Occasionally a more severe otitis media occurs, ending in suppuration, perforation of the membrana tympani, and otorrhœa, which ceases after a variable time. But otitis media is not the most severe of the affections of the organs of hearing. Certain patients lose their hearing entirely and never regain it, and that, too, with little otalgia, otorrhœa, or other local symptoms by which so grave a result can be prognosticated. This loss of hearing does not occur at the same period of the disease in all cases. Some of those who become deaf are able to hear as they emerge from the stupor of the disease, but lose this function during convalescence, while the majority are observed to be deaf as soon as the stupor abates and full consciousness returns.

Two important facts have been observed in reference to the loss of hearing in these patients—to wit, it is bilateral and complete. When first observed it is in some, as stated above, complete, but in others partial, and when partial it gradually increases till after some days or weeks, when it becomes complete. I have the records of ten cases of this loss of hearing, most of them occurring in my own practice in the epidemic of 1872, but a few of them detailed to me by the physicians who observed them in the same epidemic. According to these statistics about one in every ten patients became deaf, but in the milder form of cerebro-spinal meningitis which has prevailed since 1872, the proportionate number thus affected has been less among my patients, and the same may be said in reference to the loss of sight. One of the ten cases was a young lady, but the rest were children under the age of ten years. Professor Knapp has examined thirty-one cases. "In all," says he, "the deafness was bilateral, and with two exceptions of faint perception of sound, complete. Among the twenty-nine cases of total deafness, there is only one who seemed to give some evidence of hearing afterward." The same author has recently informed me that further experience has confirmed his previous statement, that while the blindness produced by cerebro-spinal fever is in the majority of cases monolateral, only one case had come to his notice in which the deafness was on one side only.

One theory attributes the loss of hearing to inflammatory lesions either at the centre of audition, within the brain, or in the course of the auditory nerves before they enter the auditory foramina. Thus Stillé says: "This symptom appears to depend chiefly upon the pressure of the plastic exudation in which the nerves are embedded." The other theory attributes the loss of hearing to inflammatory disease of the ear, and especially of the labyrinth. Dr. Sanderson, who is an advocate of the latter theory, remarks as follows: "As regards the nature of the affection, there appears to be good reason for believing that, like the blindness observed under similar circumstances, and sometimes in the same cases, it is dependent on inflammatory changes in the organ of hearing itself. Dr. Klebs was kind enough to show me, in the pathological museum of the Charité at Berlin, a preparation of the internal ear of a soldier who had died of epidemic meningitis, complicated with deafness, in which fibrinous adhesions existed between the bones of the internal ear and the walls of the vestibule. Dr. Klebs stated that in the recent state the mucous lining of the vestibule was detached. In the case of a young woman who was deaf from the commencement and died on the eighth day, "both tympana were natural, but in the left membrana tympani was found a dense white thickening as large as a pin's head. On the same side the lining membrane of the semicircular canals was distinctly thickened and loosed, and in the anterior canal there were semifluid purulent masses." Professor Knapp also states: "The nature of the ear disease is in all probability a purulent inflammation of the labyrinth." According to him, no disease of the middle ear could cause such complete deafness; and as evidence that the deafness is not due to central disease, Dr. Gruening obtained by electrization the normal reaction of the auditory nerve within the cranium. Moreover, if the lesion which destroys hearing be within the cranium, why is not the functions of the other cranial nerves also abolished? Moreover, Drs. Keller and Lucæ have in three post-mortem examinations found evidences of disease of the labyrinth.

An argument in support of the former of these theories is the fact that the lesion which produces the deafness is not ordinarily attended by any marked subjective symptoms referable to the ear, as otalgia, etc. Again, the

fact that the deafness is nearly always bilateral and simultaneous in the two ears, comports better with the doctrine of a central lesion, than with that which locates the lesion within the ear. But the true theory can only be positively established by dissections, and, as we have seen, several post-mortem examinations have revealed inflammatory disease of the labyrinth in those who have died having this form of deafness; while in no case, so far as I am aware, has the ear been found free from inflammatory lesions. Therefore the theory which ascribes the deafness to disease of the ear is much better established than the other, and must be accepted. Moreover, most of the aurists of this city, who have had excellent opportunities to examine these cases, believe in this theory.

(To be continued.)

THE TREATMENT OF ACUTE RHEUMATISM BY BLISTERS.[1]

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In the October number, 1881, of the *Dublin Journal of Medical Science*, appeared an interesting communication by Dr. Harkin on the pathology and treatment of acute rheumatism. The pathology of acute rheumatism is believed by the author of the above paper to consist in "a specific form of endocarditis of neuropathic origin, generally allied with myocarditis;" "in its unchecked progress speedily modifying the composition of the blood, the innervation and calorification of the body;" "in its ordinary course giving rise to lesions in the textures, the joints, the pericardium, pleura, the neurilemma, the meninges of the brain;" "in fine, in any organ accessible to nervous or arterial influence." Presumably guided by these views of the pathology of the disease, Dr. Harkin was led, after a trial of its efficiency in his own hands, to suggest the treatment of acute and subacute rheumatism, and also of gout, by means of large blisters *alone*, applied directly over the cardiac region. He regards their action as in no sense constitutional, but as wholly topical. If I correctly interpret his views, he believes that by aborting the endocarditis, the further manifestations of the disease, the implication of other textures, etc., may be prevented; and that very potent and safe means for such abortion are to be found in the local application of blisters. The blistering treatment of acute rheumatism has been recommended by various authorities, notably by Dr. Dechilly, of Vancouleurs, in France (1850), and by Dr. Herbert Davies, physician to the London Hospital (1864). Dr. Harkin's method differs from other methods in that, being based upon a different pathology, he applies the blisters to the cardiac region *alone*. In the paper referred to, Dr. Harkin gives the histories of thirteen consecutive cases of acute and subacute rheumatism, and in the *British Medical Journal* of September 23, 1882, of an additional case and also one of gout, treated by his method, and "practically without the administration of a single dose of medicine."

Although the histories of several of the cases lack completeness in the omission of the results of examinations of the heart, and in some other desirable details, the success reported in relieving the arthritic pains, in controlling the pyrexia, and in shortening the duration of the disease, was very satisfactory. It seemed to me, therefore, without accepting Dr. Harkin's views of the pathology of acute rheumatism, that his method of treatment was worthy of further careful trial and observation. During the early months of 1883, I, therefore, without any preconceived opinion as to the results, very closely watched the application of the blistering treatment in four consecutive cases of acute rheumatism, and in one of gout, in my wards at St. Luke's Hospital. The method pursued was as follows: After a careful examination of the patient, a blister sufficiently large to cover the entire cardiac area was applied and allowed to remain until a very copious serous discharge was obtained; the blistered surface was then dressed and a second blister applied as soon as the condition of the skin permitted. The discomfort caused was less than I feared. No internal medication was employed in any of the cases, with the exception of small doses of opium, given at night when demanded by the sufferings of the patient, until a fair trial of the treatment had been made. The histories of the cases are given in detail for obvious reasons:

Case I. *Gout.*—Male, aged forty, admitted March 13th. There is no family history of gout. The patient has been a free liver. He has had several attacks of inflammation of the great toes within the past two years. The present attack began one week ago; the pain was not severe until three days ago, when the great toe of either foot became swollen, red, and painful. Examination on admission: temperature, normal; examination of viscera, negative; urine, specific gravity, 1.018, acid, free from albumen and sugar; the great toe of both feet is swollen, red, and painful. Ordered rest in bed and a blister 4 × 5 inches to be applied over the præcordium.

March 14th.—The pain is less severe, there is less swelling and redness of the toes.

March 15th.—Patient is free from pain, although there is still redness and swelling of the affected joints.

March 16th.—There is slight return of pain in toe of left foot.

March 17th.—Absence of pain, swelling, and redness. The patient was permitted to remain in hospital until April 2d, although there was no return of the above symptoms.

Case II. *Acute rheumatism.*—Male, aged twenty-nine. Admitted March 1st. There is no family history of gout or rheumatism. The patient has had two attacks of acute rheumatism previous to the present one. Four days ago the toes and ankles of both feet became swollen, red, and painful; later both knees and left hip became affected. Examination on admission: Temperature, 102⅘°. All the above-mentioned joints are acutely inflamed. The apex-beat of heart is within the mammillary line; a distinct systolic basal murmur is heard, with greatest intensity over pulmonary area; the first sound at apex is slightly impure, but no murmur can be detected. Urine, specific gravity, 1.028; acid, free from albumen and sugar. Ordered a blister 4 × 6 inches to be applied over præcordium.

March 2d.—There is an abundant serous discharge from blistered surface. Temperature, 102⅕°.[1] There is little, if any, change in the arthritic symptoms. The examination of the heart corresponds with that of yesterday.

March 3d.—Temperature, 102⅘°. A moderate dose of opium was given during the night to control pain. The pain is decidedly less in all the joints mentioned above, with the exception of the right knee, but the right hip has become involved. An examination of the heart shows no change.

March 4th.—Temperature, 101⅘°. Left knee, right ankle, and hip are very painful. Examination of the heart gives the same result as yesterday.

March 5th.—Temperature, 102⅘°. There is no diminution of the above arthritic symptoms, and the right shoulder is painful and swollen. A distinct systolic murmur is heard at apex.

March 6th.—Temperature, 102⅘°. There is no abatement of the joint symptoms. The apex murmur has become more distinct, and is transmitted to anterior axillary line. The basal murmur is harsher in character. Ordered a blister 3 × 3 inches, to be applied over præcordium.

[1] Read before the Practitioners' Society of New York, November 2, 1883.

[1] The temperatures were taken at the same hour each day, in all the cases.

March 7th.—Temperature, 102°. The patient's condition has not improved in any respect.

March 8th.—Temperature, 102⅘°. The right shoulder, wrist, and fingers, the left ankle and knee are swollen, red, and painful. Both murmurs are very distinct. Ordered ol. gaultheriæ, 3 ij., ♏ xl. daily, to be taken in divided doses every two hours.

March 9th.—Temperature, 101°. There is marked abatement in all the joint symptoms. There is no change in the heart murmurs.

March 10th.—Temperature, 100⅘°. There is no pain in joints, except on motion,

March 11th.—Temperature, 99⅘°. There is an entire absence of arthritic pain and tenderness.

March 12th.—Temperature normal. There is continued absence of arthritic symptoms. From this date the patient's convalescence progressed without any relapse. On two single occasions he complained of pain in right knee and shoulder for twenty-four hours; it was unattended with redness, swelling, or pyrexia. Both basal and apex murmurs persisted up to the date of the discharge from hospital, the latter being distinctly harsh in character and transmitted beyond the anterior axillary line.

Case III. *Acute rheumatism.*—Male, aged twenty. Admitted March 18th. The patient's mother and two sisters have suffered from inflammatory rheumatism. The patient himself enjoyed good health previous to twelve weeks ago, when for the first time he was "laid up" with an attack of acute rheumatism. There have been two relapses, the second developing two days ago.

Examination on admission.—Temperature, 101⅘°. Both ankles, the toes of right foot, both knees, and right shoulder are affected. The apex beat of heart is within the mammillary line; a distinct systolic murmur is heard at apex. Urine, specific gravity, 1.024; alkaline, free from albumen and sugar. Ordered a blister 4 × 4 inches, to be applied over cardiac region.

March 19th.—There is an abundant serous discharge from blistered surface. Temperature, 102⅘°. There is no relief from pain, the appearance of the joints is unchanged, as is the character of the murmur.

March 20th.—Temperature, 101°. The arthritic pains are of greater intensity.

March 21st.—Temperature, 101⅘°. There is little if any change in the joint symptoms or the heart murmur.

March 22d.—Temperature, 101°. There is no relief from pain.

March 23d.—Temperature, 99⅘°. The patient is still suffering greatly.

March 24th.—Temperature, 100°. There is absolutely no improvement in any of the arthritic symptoms. The apex murmur is heard with the same distinctness as on admission. Ordered ol. gaultheriæ, 3 ij. daily, in divided doses every two hours.

March 25th.—Temperature normal. There is marked relief from pain, and improvement in the appearance of the joints.

March 26th.—Temperature normal. There is entire absence of pain. From this date the patient steadily and rapidly convalesced, without relapse. The apex murmur persisted and was distinct in character on the date of the patient's discharge.

Case IV. *Acute rheumatism.*—Male, aged twenty-nine. Admitted March 23d. Both father and mother of patient have suffered from inflammatory rheumatism. Seven years ago the patient was confined to the house for ten weeks with an attack of acute rheumatism. Two weeks ago he began to suffer from present attack.

Examination on admission.—Temperature, 99⅘°. Both ankles, knees, the left elbow, and right wrist are very painful, swollen, and red. The apex beat of heart is within mammillary line; a faint systolic murmur, not transmitted, is heard at apex. Urine, specific gravity, 1.020; acid, free from albumen and sugar. Ordered a blister 6 × 6 inches, to be applied over precordium.

March 24th.—There is a profuse discharge of serum from blistered surface. Temperature, 100⅘°. There is no relief from pain. The fingers of both hands and the left wrist have become involved.

March 25th.—Temperature, 101⅘°. Morphine was given during the night to relieve pain. There is no change in the apex murmur.

March 26th.—Temperature, 100⅘°. There is no abatement in the arthritic symptoms.

March 27th.—Temperature, 101⅘°. There is slightly less pain in the affected joints.

March 28th.—Temperature, 102°. Both wrists, left knee, hip, and ankle are to-day exquisitely painful, swollen, and red. It is necessary to give full doses of opium to control the patient's sufferings. The apex murmur is more distinct.

March 29th.—Temperature, 101⅘°. Even with large doses of opium there is little relief from pain. The last mentioned joints are all acutely inflamed.

March 30th.—Temperature, 102⅘°. The patient's condition remains the same. The heart murmur is distinct, but is not transmitted beyond mitral area.

March 31st.—Temperature, 101⅘° The arthritic symptoms persist with the same intensity. Ordered ol. gaultheriæ, 3 iv. daily, in divided doses, every two hours.

April 1st.—Temperature, 101°. The pain is still severe, but of less intensity than yesterday. No morphine has been given.

April 2d.—Temperature, 100⅘°. There is marked diminution in pain in all the affected joints. There is no change in the character of the heart murmur.

April 3d.—Temperature normal. The patient is almost wholly free from pain.

April 4th.—Temperature normal. There is an entire absence of pain. From this date convalescence steadily progressed without relapse. The apex murmur persisted up to the date of the patient's discharge.

Case V. *Acute rheumatism.*—Male, aged twenty-one. Admitted April 3d. The father of the patient has been a sufferer from acute rheumatism. During the past ten years, the patient states that he has had eleven attacks of inflammatory rheumatism, in three of which all the large joints were affected. The present attack was developed five days ago.

Examination on admission.—Temperature, 102⅘°. Both ankles and left knee are painful, red, and swollen. The apex beat of heart is felt to the left of mammillary line; a reduplication of the first sound at apex is heard, which is believed to represent a systolic murmur. Urine, specific gravity, 1.034; alkaline, free from albumen and sugar. Ordered a blister 4 × 5 inches, to be applied over cardiac region.

April 4th.—There is a copious discharge of serum from blistered surface. Temperature, 102°. There is no diminution of pain.

April 5th.—Temperature, 102⅘°. The arthritic symptoms show no abatement in severity.

April 6th.—Temperature, 102°. There is no relief of pain. A satisfactory examination of the heart is impossible, on account of the pain produced by the blister.

April 7th.—Temperature, 102⅘°. The patient's condition is unchanged. The reduplication of the first sound at the apex has assumed the character of a loud systolic murmur.

April 8th.—Temperature, 102⅘°. There is no abatement of the joint symptoms.

April 9th.—Temperature, 102⅘°. The arthritic pains are of the same intensity. The first sound at the apex is replaced by a loud murmur. A presystolic apex murmur is believed to also exist. Ordered ol. gaultheriæ 3 ijss. daily, in divided doses every two hours.

April 10th.—Temperature, 100⅘°. There is no pain except in the right knee, on movement. A distinct diastolic and faint systolic murmur are heard at base, in addition to the apex murmurs.

April 11th.—Temperature normal. The patient is

free from pain. There was no further pyrexia during the succeeding twelve days, and there was an entire absence of arthritic symptoms. The oil of wintergreen was gradually reduced to 3 jss. daily.

On April 23d there was a slight rise of temperature, which disappeared in thirty-six hours, without the development of any arthritic symptoms.

On May 9th the temperature began to rise again, and there were physical signs of a developing pleurisy on the right side of the chest. Very moderate effusion followed.

May 18th.—The patient had a violent chill during the night. A careful examination shows dulness with bronchial respiration and bronchophony over a limited area in the posterior scapular region of the left chest, and over a larger area of the right, above the level of flatness. Temperature, 102⅘°. A pneumonic process is believed to have developed in the lower lobes of both lungs. The heart murmurs persist. The urine is free from albumen.

May 24th.—The bronchial breathing, voice, and dulness have been marked over the areas above mentioned since the last note; the temperature has remained at about 102°, and to-day there is a slight return of pain and redness in the metacarpo-phalangeal joint of left thumb. Temperature, 101⅕°.

May 25th.—Moist râles can be detected for the first time to-day over the affected areas on both sides of the chest. Temperature, 100⅘°.

May 27th.—Temperature normal. The dulness, bronchial breathing, and voice have diminished slightly in intensity; the râles are more numerous. From this date the physical signs of consolidation gradually diminished; there was no return of arthritic symptoms, convalescence progressed slowly but satisfactorily. On the date of discharge, double basal and apex murmurs were believed to exist.

The history of the above case has been continued from the date of the discontinuance of the blistering treatment as presenting many interesting points. It illustrates the efficiency of the salicyl compounds in controlling the arthritic symptoms of acute rheumatism, and, at the same time, their failure in many cases to combat further and different manifestations of the rheumatic virus.

A careful study of the above histories will indicate at least a fair trial of Dr. Harkin's method of treatment. The cases were not selected ones, but represent the first five patients suffering from gout and rheumatism, respectively, who were admitted to my wards after I had determined to apply the blistering treatment.

In Case I. the gouty symptoms extended over a period of nearly five days. It is a common clinical experience to observe such symptoms subside within this period without other treatment than simple rest. In the four cases of acute rheumatism, the blisters were used *alone*, with the exception of an occasional dose of opium, when rendered necessary by the sufferings of the patient, for seven, six, eight, and six days respectively; and only then were discontinued, and a salicyl compound substituted, from the fact that there not only was *no* abatement, but even an increase in the severity of the local (arthritic) symptoms, and a persistence of the constitutional. An analysis of the results of the examinations of the heart during the period of the blistering treatment will not be uninteresting.

In Case II. a basal systolic murmur, heard with greatest intensity over the pulmonary area, existed on admission. A very careful examination failed to reveal more than a slight impurity in the character of the first sound over the mitral area. The latter distinctly and progressively developed into a loud systolic apex murmur, transmitted as far as the anterior axillary line, during the period of the application of the blisters, and persisted up to the date of discharge from hospital.

In Case III. there was a distinct systolic apex murmur on admission, which persisted unchanged up to the date of discharge.

In Case IV. a faint systolic apex murmur, not transmitted, existed on admission, and continued without change during the patient's stay in hospital.

In Case V. the heart was found to be enlarged on the first examination, and a reduplication of the first sound at the apex was heard. During the blistering treatment the reduplication was lost, a harsh systolic apex bruit was developed, together with a presystolic mitral murmur. Under the salicyl treatment there was a further development of the endocarditis, as evinced by the appearance of a double basal murmur.

In the thirteen cases reported by Dr. Harkin there is *no mention* of the heart in five; in two cases a mitral murmur existed before the application of the blisters, but no further reference to the condition of the heart is made. In two no cardiac affection existed before or during treatment. In two cases a mitral murmur, heard on the first examination, is reported as disappearing in the course of two and three weeks respectively. In the remaining two cases a mitral murmur was detected before treatment; in both a pericarditis developed during treatment, with a persistence of the mitral murmur in at least one of the cases up to the date of discharge.

A critical study of the above *résumé* fails, it seems to me (granting for the moment the correctness of Dr. Harkin's views in regarding acute rheumatism as a specific endocarditis), to demonstrate the efficacy of large blisters applied over the precordium, to control such an endocarditis. Moreover, my experience in the cases treated under my personal observation by his method has wholly failed to convince me of its power to affect on the one hand the endocardial affection, and on the other the severity of the arthritic symptoms and the degree and duration of the pyrexia. In conclusion I would add a few words in regard to the much discussed and criticized treatment of acute rheumatism by the salicyl compounds. Continued careful personal observation of their effects may be briefly summarized as follows:

First.—In controlling the arthritic symptoms (pain, etc.) and the pyrexia of acute rheumatism they may still be considered as constituting the most successful of all hitherto suggested methods of treatment. Their marked effect upon the pyrexia cannot be explained by their well-known antipyretic power *alone*.

Second.—While controlling the arthritic pains and pyrexia they seem incapable, in many cases, of wholly destroying the rheumatic virus, as is shown in the subsequent development of endocardial and pericardial affections and inflammations of other fibrous and serous textures.

Third.—Further proof is needed of a more frequent implication of the endocardium and pericardium under the administration of the various salicyl compounds than under any other hitherto advised treatment.

Fourth.—The most efficient, if not essential mode of their administration is in frequently repeated doses (every two hours), that the economy may be kept continuously under their influence; they should be continued in the initial doses during the first ten days of the disease, and given in very gradually diminished amount during the patient's entire convalescence.

Fifth.—Their possible anæmic effects may be rationally combatted by the use of iron salts before or with the beginning of convalescence.

Sixth.—A continued experience with the salicyl compound contained in the oil of wintergreen (methyl ether of salicylic acid), in the treatment of a large number of cases of acute rheumatism, confirms my favorable opinion,[1] expressed a year ago, of its efficiency and other desirable qualities. An efficient dosage is two and a half to three drachms daily. A simple and easy mode of administration is in sealed capsules, each containing ten minims of the oil.

I would express my indebtedness to Drs. Devlin, Beach, and King, members of the hospital House Staff, for their efficient assistance in the observation of the above recorded cases.

[1] Medical Record, November 4, 1882.

THE RELATION OF PERINEPHRITIS AND PYONEPHROSIS TO MORBUS COXÆ.

By JOSEPH L. BAUER, M.D.,

LEHIGHTON, PA.

Abscesses in and surrounding the kidney have long since been recognized as distinct affections. Their detection is aided by definite rules of diagnosis; their prognosis, pathology, and treatment have been written with all the elegance of scientific language. And yet an important factor of the affection, interesting both to the physician and surgeon, has found no place in the books of some of our greatest surgical luminaries. Coxalgia occupies an important part in all surgical dissertations, but perinephritic abscess or pyonephrosis, in their surgical relations, is disposed of in a few brief sentences.

One would suppose that such orthopedists as Barwell, Bauer, Brodhurst, Hueter, Taylor, or Sayre would enlighten us upon those diseases which bear a near resemblance to coxalgia, and thus offer us some points of differential diagnosis. A careful examination of their literary labors fails to disclose such suppositions; in fact, periostitis of the femur seems to be the nearest relation to coxalgia, and occupies some space in their scientific analogies. Dr. V. P. Gibney, of New York, is the first to direct our attention to the great similarity between coxalgia and perinephritis. Up to that time the medical man had absorbed whatever interest attached to these diseases, and it would be justifiable to place the proper surgical value upon them. It shall be my object to strengthen and indorse the position of Dr. Gibney, and endeavor to secure professional recognition in this matter.

The following two cases are of absorbing interest:

Case I. *Perinephritic abscess; pointing at Scarpa's triangle; operation; death.*—While living in St. Louis, my friend Dr. Grayson, of Venice, Ill., requested me to see a little lad, aged nine, who had consulted a prominent surgeon of St. Louis for supposed coxalgia. He stated that "it might run into hip disease," and advised the Hutchinson treatment. The boy grew worse rapidly, and I was called to render any assistance possible. An injury had been inflicted upon the right renal origin, the nature of which I cannot recall. I found him in bed, surrounded by the worst of hygiene, and a saturated malarial atmosphere. The face bore evidences of pyæmia; temperature, 104° F.; great thirst and loss of appetite; urine high-colored and very scanty. The body was greatly attenuated; abdomen enlarged and tympanitic; the right limb in extreme flexion and adduction, and an oval tumor discernible over Scarpa's triangle. He complained of constant pulsating pain over the tumor, as well as pain upon pressure upon the hip-joint; also reflex pains during the night. I tapped the abscess by introducing the exploring trocar in the outer aspect of the thigh, thus confirming my diagnosis of abscess. The next day I anæsthetized the patient, and succeeded in reducing the flexion and adduction entirely, and then made an incision in the outer aspect of the thigh, and succeeded in removing a large quantity of matter. A drain was introduced, and the cavity washed out with an antiseptic solution. *As soon as consciousness returned all pain in the joint ceased, and I could rotate the limb in any direction without any inconvenience whatsoever.* Examination per rectum disclosed no acetabular softening or perforation, nor was there *any roughness of the articular surfaces.* The limb remained in normal position, but the pyæmic condition continued, notwithstanding the constant flow of pus. During this time large quantities of matter passed with the urine. My patient grew rapidly worse, and succumbed to suppression of urine.

Case II. *Pyonephrosis; coxalgic symptoms; abduction of the right foot; treatment.*—S. H——, a married lady, aged twenty-three, consulted me for what her physician designated as "flying rheumatism?" She complained of constant pain in the back, in the knee and hip-joint, as well as difficulty and pain on locomotion, knowing that she suffered from hystero-epilepsy—having fractured her acromion from a fall down stairs during one of these attacks. I paid but little attention to the lumbar pain, nevertheless, I questioned her closely as to her secretions, and could learn nothing therefrom. Her limping and pain in the hip determined me in my diagnosis of incipient coxalgia, and I therefore suggested the most valuable and beneficial treatment of Hugh Owen Thomas, of Liverpool. The pain continued and increased in severity both day and night, and while the plaster dressing was still in situ, extreme abduction of the foot set in. Any effort to restore its position produced extreme pain, extending up the entire limb and into the abdominal cavity. I discarded the Thomas treatment and placed her in bed. In recumbency, the limb was completely abducted, and the pain increased in severity. Extension apparatus with weights and morphia gave some relief. During this time she frequently had attacks of urinary retention, which was relieved by catheter. One evening she experienced a sudden desire to pass water, which was accomplished without difficulty. The urine was admixed with large quantities of pus. *As soon as this occurred the coxalgic symptoms and pedal abduction disappeared.* As soon as the discharge ceased the same train of symptoms recurred. I then learned for the first time—false modesty having prevented the statement—that she had suffered from urinary difficulties previously. This opened my eyes, and upon examining the right renal region, I detected fluctuation but no enlargement. I did not see her for some time afterward. When I returned, I found a symmetrical enlargement of the abdomen, quite dull on percussion, and a diminution in the amount of urine. Fearing hydronephrosis from an occluded ureter, I determined upon consultation. After a careful examination by my friends, Drs. Reber, Horn, and Seiple, my diagnosis was agreed upon. While I should have liked to have used some surgical method to reduce the abscess, or determine the character of the abdominal enlargement, I deferred to more conservative suggestions, and waited for developments. The case is still repeating itself, the abdomen enlarging still more, and no further developments have taken place. Notwithstanding the great pain in the hip, and the abduction of the limb and foot, no intra-articular effusion existed, and I was compelled to rest upon the diagnosis of pyo-nephrosis.

Remarks.—Pyonephrosis may be due to embolism; direct injury to the renal organ; suppuration extending backward from urethra, bladder, ureter, or renal pelvis; irritation of, or the closure of some renal ducts, by calculi; tubercular disintegration, or the breaking-down of hydatid cysts, and pyæmic infection.

Roberts[1] says, that pyonephrosis is usually preceded by chronic pyelitis, terminating in the production of pus. The pyelitis usually owes its origin to calculous disease, and the impaction of a stone producing some obstruction. The same cause would naturally prevent the escape of pus forming in consequence of such inflammation. Blood-clot, tubercle, or any other morbid product causes the same effects. Perinephritis may be due to pyonephrosis—the renal abscess opening into the capsule—by extension of the inflammation from the kidney or renal pelvis. But more particularly to direct injury over the kidney may be ascribed the common cause of perinephritis, as in the case of the boy. I recollect the case of an adult in middle life suffering from lumbar abscess, due to injury and undoubtedly perinephritic, in which recovery was ensured by a deep incision and antiseptic ablutions.

Abscess of the kidney may pass into the renal pelvis and be discharged through the ureter, or may burst as in perinephritic abscess in any direction. Such cavities may open into the peritoneum, colon, or to the surface. It must be borne in mind that the psoas muscle arises in close proximity to the kidney, and that this fact, together with gravitation, would presuppose a selective affinity for

[1] Renal Abscess, by Fred. T. Roberts, M.D., F.R.C.P., Reynolds' System of Medicine, page 711. 1880.

the sheath of this muscle. In fact, authorities agree that this occurs in the majority of cases. Indeed, I can recall some cases of psoas abscesses, supposedly due to spinal caries, which were undoubtedly renal abscesses of some description.

This fact being disposed of, the question naturally arises: In what way can such abscess produce coxalgic symptoms? We must, of course, assume that the pus has penetrated the sheath of the muscle and has secured no outlet, *thus occasioning a constant pressure, in every direction, upon neighboring nerves and tissues.* We know, still further, that the nerves supplying the limb arise from the lumbar and sacral plexuses, and that the psoas muscle lies in close proximity to them; and it seems logical, therefore, if we conclude that the constant irritation surrounding the renal region, coupled with the pressure upon the surrounding nerve plexuses, must be the cause of the pain as well as the muscular contraction. Indeed, the retention of urine in S. H—— can be due to the same causes.

But it is in diagnosis and treatment that the greatest importance centres. If pus were always demonstrable in the urine the diagnosis would be comparatively easy. But this occurs *usually* in pyonephrosis, and only then when the secretory ducts are permeable. In case of closure of the ureter by calculus or other foreign substances the diagnosis is rendered more obscure. In perinephritis, also, no pus is present in the urine unless it has been due to the bursting of a renal abscess proper into its capsule. The urine must naturally be high-colored and contain excess of natural and some foreign elements, but, as we have to do with a pyogenic condition, no diagnostic weight can be attached thereto. In the case of S. H—— no tumor presented at Scarpa's triangle; but there was distinct pain over the lesser trochanter, seeming to indicate that the psoas muscle had been affected by the purulent infiltration. It is a clinical fact that irritation of certain muscles will occasion temporary inflammation of a joint, as in talipes valgus, and it would seem, therefore, as if the coxalgic symptoms were due to the contraction of the flexors, adductors, or abductors, as well as the disturbed innervation of the articulation. In the moment pressure is relieved by the copious discharge of such abscesses all pain and mechanical hindrances disappear. In the case of the boy the same result occurred. When the abscess was drained the various motions of the limb were absolutely painless.

Diagnostic differentiation is rendered very difficult in the initiatory stages; in that event, where there has been any history whatever of urinary trouble, conjoined with coxalgic symptoms, scientific accuracy would require a careful examination of the lumbar region. This would apply also where such history is absent. For it can be readily inferred that the mechanical treatment of coxalgia would be ill-applied in the condition mentioned, and that it would be extremely mortifying to the surgeon, who, desiring to divide muscular contractions, finds that anæsthesia dissipates them. In the stage of adduction and flexion, anæsthesia is probably the only means of relieving our uncertainty, unless the abscesses have already discharged. For, *in coxalgia, the muscular contractions and pain are neither relieved by anæsthesia or the creation of fistulous tracts.* And in coxalgia, also, we have the undisputed presence of either articular effusion or a defined roughness of the articular cartilages.

These abscesses either discharge themselves and get well, the pus becomes inspissated, or we must resort to surgical methods. If fluctuation over the kidney is evident, aspiration is the proper solution. Should this not suffice, deep incisions would be justifiable under antiseptic precautions, and, if found necessary, the kidney could be removed. Otherwise rest, and the usual antipyæmic remedies, with glorious expectancy, must be resorted to. Should the distention of the abdomen persist (S. H——), together with further purulent infection, I should most certainly consider it proper to advise the most radical surgical methods.

Progress of Medical Science.

MODIFICATION IN THE SENSIBILITY OF THE SKIN OF THE ABDOMEN DURING PREGNANCY.—Dr. R. Teuffel (*Zeitschrift für Biologie*, vol. xviii., and *Bulletin de Thérapeutique*, August 15, 1883), has repeated the observations of Czernak relating to the marked diminution in the sensibility of the cuticle of the abdomen during pregnancy. He finds that there is a constant relation between the diminution in the sensibility of the skin and the distention of the latter. Other authors have failed, according to Dr. Teuffel, to agree regarding this interesting symptom, because of the fact that, during pregnancy, the elasticity of the skin varies notably in different individuals and that consequently the relative degree of distention is likewise variable. In the neighborhood of the *striæ*, where the distention reaches its maximum, the diminution in the cutaneous sensibility is much more pronounced than at any other point.—*Journal de Médicine de Paris*, September 29, 1883.

TRICHLORACETIC ACID AS A REAGENT FOR THE DETECTION OF ALBUMEN IN URINE.—Raade proposes the following process for the ready detection and quantitative estimation of albumen in urine. Add a small quantity of the acid to the suspected urine, allowing it to glide along the inner surface of the test-tube holding the urine. The latter should not be agitated. A turbid zone of coagulated albumen is formed, if the latter be present, and does not disappear when heated, as do the urates. The urates are not, however, precipitated when the urine is diluted with one-third its volume of water. A quantity of albumen equal to .0295 gramme may be recognized by this test in 250 c.c. of urine. The relative sensitiveness of the tests for albumen by metaphosphoric acid, nitric acid, and trichloracetic acid may be represented numerically by the figures 1, 3.7, 6.2.—*Bulletin Général de Thérapeutique*, September 30, 1883.

APHASIA AND AGRAPHIA IN TYPHOID FEVER.—Dr. Baas, of Mayence, mentions in the *Deutsche Med. Wochenschrift* a case of aphasia and agraphia, with paralysis of the right facial nerve and of the right arm, in a boy eight and a half years of age in the course of a severe attack of typhoid fever. The paralysis appeared on the twenty-first day, when the sensorium was much affected; the other symptoms were first noticed on the return of consciousness. The patient could not pronounce either words or numbers, although he held up his fingers correctly to express a number suggested to him; and the scrawls which he made on attempting to write were the source of great amusement to him, as he saw them so differentfrom what he intended to make. There were no signs of improvement in the aphasia until eight weeks from the commencement of the illness, but then the boy began to learn step by step anew to speak and to write, and by the end of the month he could do both well. The lesion was probably a capillary apoplexy in the left third frontal convolution and its neighborhood.

HOW TO GIVE QUININE.—Dr. Young, from an extended experience with quinine, in the febrile affections occurring in Rome, Italy, concludes as follows: 1. Never to give quinine in antipyretic doses in cases where the bowels are confined and the secretion of urine is scanty. 2. In cases where it is being administered and an increase of dose is desirable, this may be safely done if the skin, bowels, and kidneys maintain their normal functional activity. 3. In many cases of remittent and intermittent fevers, the combination of the drug with chloride of ammonium or a salt of potash or soda is likely to be more easily tolerated as well as more useful than if it be administered in a pure form. 4. During the administration of quinine, should a headache come on or increase in intensity, the case requires the most careful attention.—*The London Practitioner*, October, 1883.

SPASM OF THE TONGUE.—E. Ganghoffner (*Centralbl. für die Med. Wiss.*) describes the following case: A youth, aged nineteen, had from infancy suffered under a spasmodic affection of the muscles of the tongue, which, when he began to speak, protruded from his mouth. Simultaneously with this movement he experienced jerking of the right lower extremity. In repeating by heart a poem, in singing, or in rapid speaking the spasm of the tongue would pass off. The patient was anæmic, but otherwise in good health. When not speaking, he seemed to have nothing about him abnormal. His mother had suffered from deafness from her childhood; a brother also had presented a similar defect of speech; a sister was epileptic. Treatment by bromide of potassium had no influence over the spasms. Doubtless this was a case of chorea, the spasm of the tongue being a local manifestation of this neurosis.

INTERSTITIAL NEPHRITIS OF BACTERIAL ORIGIN OCCURRING IN CHILDREN.—Dr. Ludwig Letzerich writes in the *Allgemeine Medicinische Central-Zeitung* of September 29, 1883, concerning a peculiar inflammation of the kidneys occurring in children, independently of any of the acute exanthemata, which he observed and studied durthe past spring and summer. There were twenty-four cases, all presenting exactly similar symptoms, and in all of which the same bacterial forms were found in the urine. Three children died of acute uræmia, the others recovered. The micro-organisms voided with the urine were cultivated through four generations, and then used in experiments upon rabbits. In every case the kidneys presented the same macroscopical and microscopical appearances as were found in the three children dying of this nephritis. The micro-organisms were in the form of rods resembling the bacilli of typhus, but somewhat longer and broader than these. When cultivated, the organisms formed no closed micrococci colonies from which the rods were developed, as is the case in the typhus organisms, but appeared as a mycoderma, as true bacilli. In the interterstitial tissue of the kidneys they were seen in large collections from which long threads were traced to the cortex and medullary substance. The kidneys were very hyperæmic, and in places broad, dark red, almost black lines were visible. There were collections of wandering cells in the interstitial tissue. Dr. Letzerich thinks that the organisms were taken in with the drinking-water, though further investigation is necessary for the elucidation of this point.

DYSMENORRHŒA.—There are few subjects more worthy of sound study than dysmenorrhœa. It has received for the last fifty years more attention at the hands of gynecologists than ever before. But still it cannot be said that authorities are agreed on its essential causes. For a long time it came to be regarded as eminently a case for treatment by specialists. The mechanical theory of its causation largely ruled practice, in some few cases with brilliant relief, and perhaps cure, in others without success, and often with the effect of adding to the mischiefs which it was intended to remove. The very nature of the complaint, and the fact that in its serious forms it affects chiefly unmarried women, render the complete investigation of it a matter of much difficulty. The existence of more or less dysmenorrhœa in the majority of women is a fact. Even those who are unwilling to recognize in this fact any argument against the capacity of women for competing in the labor market with men do not deny that in a large proportion—nearly fifty per cent.—this dysmenorrhœa is considerable in amount.

In a paper by Dr. John Williams on the natural history of dysmenorrhœa, read before the Obstetrical Society of London, he divides his cases into two sets—first, cases of primary dysmenorrhœa; secondly, cases of acquired. The acquired cases are so few (22) compared with the others (873) that we need not here allude to them. His conclusions are as follows: "Dysmenorrhœa should be studied first under the least complex conditions—in single women. 2. Dysmenorrhœa in single women is rarely acquired; it is almost invariably primary—viz., it appears with the menstrual function. 3. Dysmenorrhœa in a few, but rare, cases ceases spontaneously a few years after puberty. 4. Marriage, if sterile, aggravates the disorder in many cases; it is only very seldom that it relieves the pain. 5. Child-bearing cures a large number of cases, and it is not impossible that were all puerperal complications excluded it would cure every case. 6. The proportion of sterile to fertile women subjects of primary dysmenorrhœa is one to twelve. 7. Menstruation begins in women who become sufferers from primary dysmenorrhœa at about the estimated average age for the appearance of the function in London. 8. Menstruation is regular in about two-thirds of the cases, and irregular in about one-third. 9. The menstrual fluid is profuse in about two-fifths of the cases, scanty in about one-half. It contains clots or shreds in about three-fourths. 10. The changes which take place in the fluid in the course of dysmenorrhœa are various, and cannot at present be classified. 11. The uterus is imperfectly developed. It may be too short, or too small in volume, or it may be defective in both respects. The cervix may be conical, and the os small and round, but stricture of the canal in any part of its course is infinitely rare. 12. The changes in the uterus due to dysmenorrhœa are slight hypertrophy, erosion and eversion of the mucous membrane of the cervix, and catarrh. The cavity increases but little in length, for after years of suffering it measures rarely more than two and a half inches in length. In the early stages the tissues of the uterus are in some cases soft; in the more advanced, hard. 13. The hypertrophy of the uterus is probably the result of periodically increased muscular action. 14. Ovaritis and perimetritis are possible consequences of dysmenorrhœa. 15. The menstrual pain is the result of spasm of the uterus, excited by the separation and expulsion of shreds of decidua and clots, in an organ whose sensitiveness in the performance of its function is enhanced by inappreciable conditions of tissue dependent on imperfect development, often associated with others, such as anæmia."—*The Lancet*, September 15, 1883.

CONCUSSION OF THE BRAIN IN A YOUNG CHILD.—At the recent meeting of the French Asociation for the Advancement of Science, held in Rouen, Dr. Cartaz related a case of transitory hemiplegia, due to cerebral concussion in a child two and one-half years of age (*Gazette des Hôpitaux*, September 29, 1883). The patient fell, striking the back of his head on the floor. When he was raised up it was observed that he was unable to support himself on the right leg. M. Cartaz found right hemiplegia without anæsthesia, and incomplete facial hemiplegia with aphasia. The child was quiet, there were no convulsions and no coma. There was no lesion of the cranium discoverable, nor was there any febrile reaction. Three days after the injury the child articulated a word that he was accustomed to employ frequently in ordinary conversation. In another three days he had regained the power of speech, and was able to walk, dragging his leg slightly. At the end of another week he had completely recovered. In consideration of the rapidity of the development of the symptoms, the localization of the paralysis (right hemiplegia of both face and trunk), and the absence of any febrile reaction, the author was led to regard the condition as one of concussion of the brain.

ERYTHRASMA.—Dr. Besnier thus describes this little-known though, as he states, rather frequent affection: It occurs in patches having somewhat the appearance of intertrigo, but presenting a slight pigmentation. These patches, of a more or less rounded form, occupy sometimes a pretty considerable extent of surface. They are seen in the axilla, between the thighs, on the scrotum, in all parts where intertrigo is met with. In the parts where the integument is free from folds the patches present a

pale red color, whence the name of erythrasma. There is but little itching and no constitutional reaction. It is a parasitic disease, the parasite of which, extremely minute and only to be seen by means of the immersion lens, bears the name of *microsporon minutissimum*. The affection is to be distinguished from simple discolorations of the skin by the pruritus and a slight branny desquamation. It is differentiated from herpes tonsurans by its uniformity of color from the centre to the periphery of the patch as well as by its degree of pigmentation. From pityriasis versicolor it is distinguished by this same pigmentation and by the impossibility of raising any scales by the scraping of the finger-nail. The affection is devoid of gravity.—*Revue Médicale*, October 6, 1883.

Influence of Diphtheria upon Pregnancy.—In a communication addressed to the Academy of Medicine of Paris (*Archives Générales de Médicine*, October, 1883), Dr. Ollivier concludes that diphtheria may acquire an additional gravity when occurring in pregnant women, because of the liability it has to cause abortion. This accident is due, in the larger number of cases, not to asphyxia nor to an elevation of the temperature of the blood but to some alteration in this fluid, an alteration which, if it is undefined, is nevertheless incontestable. The possibility of abortion with its dangers calls for increased precautionary measures and more strict isolation in the case of pregnant women in the same house or in the same hospital ward with patients suffering from diphtheria.

A New Application of Tenotomy.—The limited power of extension possessed by the ring-finger is sometimes of great inconvenience, especially to pianists. In the case of men in whom this condition was very marked Dr. Forbes recently divided the cross fibres connecting the tendon of the extensor communis for the ring-finger with those passing to the middle and little fingers. The operation was almost painless and the wound healed quickly, leaving an almost imperceptible scar. Before the operation the finger could be raised scarcely one-fourth of an inch, but after the tenotomy it could be extended one and one-fourth inch, and lost nothing of its strength in consequence.—*Wiener Med. Wochenschrift*, September 22, 1883.

Bilateral Hallucinations Differing in Character according to the Side Affected.—Hallucinations affect usually the senses on both sides symmetrically, that is, the subjective images or noises seem to be perceived by both eyes or both ears in equal degree. Sometimes, as noted by Cahneil, Moreau, and others, they are unilateral and the sounds are heard in one ear only, or images are perceived by one eye alone. In other rare cases the hallucinations are bilateral but find different expression on the two sides. The right ear, for example, hears only flattering and pleasant remarks while insults are poured into the left ear. At the recent Congress of the French Association for the advancement of science, Dr. Magnan related several instances of this peculiar condition. In one case the imaginary sounds were at first confined to the right ear, and were of an insulting nature. After a time the patient began to hear prophecies of success and riches, encouraging and commendatory voices in the left ear. Sometimes he heard bells ringing; when they were heard in the left ear they were of good omen, but when in the right they foretold, he said, the approach of evil. The good and the evil genii thus ruled him in a sort of Manicheism. In three other patients delusions of an ambitious nature were manifested through the organs of sense on the right side, while on the left the hallucinations were of a saddening character. M. Magnan summed up his conclusions derived from a study of these cases as follows: 1, bilateral hallucinations of a double character are independent of any local disturbances in the organs of sense; 2, they differ in no way from the more common forms of delusions either by their manner of apparition or by their general characters; they are an additional proof of the functional independence of the cerebral hemispheres; their organic seat is in the sensorial centres of the cortex; 4, experiments conducted upon patients in various states of hysterical hypnotism corroborate in all points the results of clinical observation.—*Revue Médicale*, September 22, 1883.

Subperiosteal Resection of the Humerus with Osseous Reproduction in an Adult.—Dr. Nicaise reports the following rare instance of the growth of new bone after resection in an adult. In 1871 he performed a subperiosteal resection in a man, thirty-three years of age, whose humerus had been shattered by a bullet, the radial nerve being also severed. Suppuration ensued, and the operation was performed eighteen days after the receipt of the injury. Numerous loose sequestra were removed and also a necrosed portion of the upper fragment, two inches in length, to which a portion of the deltoid was attached. After the operation there was a separation between the two fragments of the humerus of between five and six inches, the interval being occupied only by the ragged periosteum. No attempt to approximate the two ends of the bone was made, but the arm was placed in a splint so as to maintain the limb at its full length. Repair proceeded rapidly, and so complete was the reproduction of osseous tissue that after seven months it was impossible to detect the line of union between the old and new bone. The arm was shortened less than half an inch. The radial paralysis persisted and led to atrophy of the muscles supplied by that nerve, yet the patient was able to resume his work as a stone-cutter. He remained in excellent health for eight years, and then had an abscess in the arm, which, however, healed readily under appropriate treatment. Dr. Nicaise, thinking that the constant jarring of the new bone from the use of the mallet might have caused an osteitis, advised rest or the choice of some other occupation, but his advice was unheeded. The patient continued at his work for three years longer, when, after severe pain of several weeks' duration, abscesses and fistulæ formed in the arm. The suppuration was profuse, and the patient became emaciated and feverish. A spontaneous fracture having taken place, the arm was disarticulated. In the upper portion of the reproduced bone there was found fungoid osteitis with a formation of sequestra which had led to its separation from the old bone. The surface of the new bone was rough and channelled by numerous blood-vessels; the periosteum was thickened and closely adherent. The upper end of the old humerus showed signs of a chronic osteomyelitis.—*Centralblatt für Chirurgie*, September 29, 1883.

Acute Ascending Paralysis.—A case of acute ascending paralysis (Landry's paralysis), eventuating in recovery, is reported by Dr. Lamberto Antonini. The patient was a small, slightly built, delicate woman, fifty-five years of age, originally of good health, but who had suffered from uterine disorders since the birth of the second of her seven children. She was somewhat nervous and presented some slight hysterical manifestations, occasional hot flashes, globus, and headaches. One morning she felt a little weakness of the limbs, which gradually increased to a complete loss of power. Examination showed motor paralysis of the lower extremities, so that only very slight movements of the feet were possible, relaxed muscles, but no atrophy. Sensibility, tendon and skin reflexes were normal; there were no painful pressure points over the spine, no feeling of constriction in the abdomen; sight was unimpaired; the pupillary reactions were normal; there was no headache; the intellect was unaffected; deglutition and the functions of the bladder and rectum were normal; the temperature was from 100° to 102° F. On the evening of the second day the patient complained of a tired feeling and formication in the hands, and the following morning there was complete paralysis of the upper extremities. There was also

difficulty of respiration and the feeling as of a heavy weight upon the chest. All the symptoms increased in severity up to the seventh day, and then continued without change for five days longer. The dyspnœa reached so threatening a point that the doctor and patient momentarily expected the end. The electrical examination, made while the disease was at its height, showed perfectly normal muscular and nervous reactions to both the galvanic and faradic currents; no reaction of degeneration. On the twelfth day the patient was able to move the arms and fingers, and the following day the dyspnœa and paralysis of the lower extremities began to mend, so that on the sixteenth day all the paralytic symptoms had disappeared. A double hypostatic pneumonia arose about the tenth day and confined the patient to her bed for six weeks. The temperature during the course of the primary disease varied from normal up to 102°. There was no enlargement of either liver or spleen, and there were no bed-sores. The treatment consisted, during the first few days, in purgatives and in wet cups along the spine; later, blisters and the internal administration of excito-motor remedies with wine and quinine. Repeated observations have shown the permanence of the cure.—*Centralblatt für Klinische Medicin*, September 29, 1883.

The Contagion of Tuberculosis.—The following are the conclusions arrived at by M. Daremberg in a communication addressed to the Academy of Medicine of Paris (*Bulletin de l'Académie*, October 7, 1883): 1. Tuberculosis is a disease of parasitic nature, transmissible by inoculation, alimentation, or inhalation. 2. It is always caused by the absorption of a germ from without. 3. When occurring by inhalation the quantity of the contagion is of little moment. It can operate only in a suitable soil. In a word, contagion is an influence to which all are exposed, but which is operative only in those individuals in whom hereditary or acquired vices of nutrition have prepared a field suited to the growth and reproduction of the germ. 4. Local and general tuberculoses differ only in degree. 5. Scrofula appears to be a diathesis, while tuberculosis is an infection engrafted upon diatheses. 6. The infectious germs of tuberculosis are not usually inherited, but rather the vices of nutrition which have provoked the disease in the ancestors. 7. Therapy, while permitted to seek for specifics, ought, in the way of prophylaxis, to aim at the destruction, through general hygiene, of the causes which prepare a fit soil for the reception of the tuberculous contagion. After the disease is established it should seek to combat the phenomena arising in the economy from the presence and proliferation of the infectious agent.

Douches of Compressed Air.—Dr. Maurice Dupont publishes in the *Bulletin Général de Thérapeutique*, September 30, 1883, an original article on the above subject. He employs air under a pressure of three atmospheres, which is allowed to escape through a tube made of the material used in the manufacture of gum-elastic catheters, provided with a nozzle, the orifice of which measures from 8 to 10 millimetres. The jet of compressed air is directed upon the bare skin of the patient, who either stands or assumes a recumbent position. The first result of the flagellation is to compress the superficial tissues of the flagellated area and to repel the blood from the peripheral capillaries into those of the deeper parts. Refrigeration of the surface thus treated at once ensues, only to be succeeded by a rapid reaction, which is indicated by marked rubefaction of the skin. The patient does not need friction after the douche, as is the case when the cold water douche has been employed, and since he is not wet, there is no danger of subsequent depressing refrigeration resulting from evaporation. If excessive refrigeration be desired a few drops of liquid may be mingled with the jet of air, a genuine pulverization of the fluid thus obtained and local hemianæsthesia produced by the rapid evaporation on the cutaneous surface. After the douche the patient experiences an agreeable sense of warmth in the skin, due to the reactionary congestion which rapidly appears, owing to the energetic percussion exerted on the cuticle by the strong current of air. Dr. Dupont regards the douche of compressed air as indicated (1) in pulmonary tuberculosis, chlorosis, anæmia, and obesity, to modify nutrition; (2) in œdema, hydrarthrosis, and ankylosis, to stimulate the circulation and to favor the reabsorption of effusions; (3) in contractures and hyperæsthesias the air-douche has anæsthetic properties, easily augmented by the addition of carbonic dioxide; (4) the air-douche may be a useful adjuvant to electricity in paralysis.

Visible Capillary Pulsations.—M. A. Ruault recently read a paper before the Clinical Society, which relates to the visible capillary pulsations. The symptomatic value of this phenomenon was first indicated by Quincke. According to this author the capillary pulse, indicated by alternate redness and pallor of the tissues concerned, isochronous with the cardiac systole and diastole, is specially observed under the finger-nails in healthy subjects, as well as in slight chlorosis and particularly in aortic insufficiency. It is occasionally accompanied by a similar pulse visible at the fundus oculi, by the ophthalmoscope. M. Ruault's communication relates, however, to a variety of visible capillary pulse which may be observed on a so-called vaso-motor spot, produced by rubbing the forehead with the finger-nail. The capillary pulse is plainly seen in these congested areas if the observer's eye be maintained at a distance of thirty or forty centimetres from them, and the cardiac pulsations are easily counted. M. Ruault has never observed the capillary pulse in healthy persons, but in chlorotic patients and in those suffering from lead poisoning, whose arteries presented the fibroid degeneration known as arterio-sclerosis. The pulsations in question were most constantly observed, however, in patients with aortic insufficiency, especially in those whose cardiac action was regular and strong. It therefore seems that the capillary pulse can only occur in those pathological conditions attended by co-existing augmented cardiac impulse and general arterial contraction, as is frequently the case in arterio-sclerosis.—*Journal de Médicine et de Chirurgie Pratiques*, October, 1883.

Bloody Tears.—M. Damalix has published an article relating to the rare phenomenon of sanguineous lachrymation. He cites two well-authenticated cases of this curious affection, reported respectively by M. Hasner and by M. Brun. In these cases the eyes filled quickly with the bloody tears, the sanguineous character of which was demonstrated by microscopical examination. This affection is to be carefully distinguished from hemorrhages dependent upon orbital or conjunctival disease, such as polypoid conjunctival vegetations developed in the *culs-de-sac* of the conjunctiva. Genuine bloody tears are quite independent of any ocular or conjunctival disease and their appearance is irregular. No apparent cause leads to their effusion. In some cases the escape of the tears is unattended by pain. In others the patient experiences pain in the forehead, the eyebrow, and at the root of the nose, or a sensation of pruritus, formication, or heat in the eyelids. These morbid sensations persist only a few instants and disappear with the appearance of the tears. The escape of the tears continues only a few minutes and the quantity of sanguineous lachrymal secretion varies from a few drops to a wine-glassful. This phenomenon is usually intermittent, sometimes regular, but almost always transitory and attended by hemorrhages from various cutaneous or mucous surfaces. Sanguineous lachrymation appears, by preference, in anæmic individuals, in those inclined to hæmatophilia and in hysterical women.—*Journal de Médicine et de Chirurgie Pratiques*, October, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 8, 1883.

CONCERNING THE DANGER FROM CONTAGIOUS DISEASES THROUGH THE CIRCULATION OF BOOKS.

SOME time ago we referred to what we considered highly sensational and ill-considered remarks made in *The Lancet* and *British Medical Journal*, regarding the danger from contagious diseases through the circulation of books. We stated at the time that the subject had been very thoroughly investigated in this country, and that our English contemporaries were evidently quite ignorant of the results thus obtained. However, the alarmist cry, issued from London, has been caught up and widely echoed by various medical and lay journals. Therefore we venture to return to the subject now.

In 1878 the directors of the Chicago Public Library appointed a committee to examine into this question of the communicability of contagious diseases through the agency of books. After a careful investigation, Mr. W. F. Poole made a report in 1879. He had corresponded with the librarians of all the principal libraries in this country, and with nineteen medical and sanitary experts. Not one of the latter gentlemen had ever known of a case of contagious disease communicated by books from public or private circulating libraries. This fact is especially significant when we remember the enormous number of books annually circulated. The total number of large public libraries in the United States in 1881[1] was 3,988, containing 12,889,598 volumes, and the number of books circulated annually is, at a low estimate, 9,912,760 (883 libraries reporting). In some large libraries more than a dozen assistants are employed, who are constantly handling and moving among the books. Yet, according to the reports of the librarians, no case of contagious disease among these, communicated by the books, had been known. A recent statement from Mr. Peoples, librarian of the New York Mercantile Library, is to the effect that this immunity has continued for the four years since the inquiry of Mr. Poole was first made.

Dr. Green, of Boston, who examined this matter carefully in 1872, when an epidemic of small-pox was raging in that city, stated that among 4,700 cases whose history was obtained, in not one instance was the origin referable to books.

So far as the evidence shows, therefore, we have no reason to believe that there is practically any danger from this source.

Discussing the question from a purely theoretical point of view, it cannot be denied that a paper-covered book can carry the contagion of scarlet-fever and small-pox. A few cases originating in this way through private volumes are alleged to have occurred. We cannot say, however, that even the evidence for this is positively established.

The danger so sensationally heralded is, therefore, so slight that it can be, in ordinary times, ignored. When contagious diseases are extensively prevailing, or an epidemic occurs, it will, of course, be proper to take precautions. These consist in the notification to librarians by the health officers of infected dwellings. It is also recommended to dust the shelves with an antiseptic powder.

[1] Report of Commissioner of Education.

TO SECURE A NEW MEDICAL LAW.

THE profession of the State has received a new evidence of the enterprise and earnestness of the Erie County Medical Society in its efforts to secure reform in our method of creating medical men and regulating medical practice. A circular notice has been sent out by the Committee on Legislation, the notice including a copy of the proposed bill to be submitted to the next Legislature, a memorial presenting succinctly the arguments for the bill, and a personal letter asking the attention of individual physicians to the matter.

The general tenor of the bill is already well known. It authorizes the appointment by the Governor of nine medical men, who shall constitute the "Medical Faculty of the University of New York." Six of these gentlemen are to be members of the regular school, two of the homœopathic, and one of the eclectic. After June 1, 1884, all persons desiring to practise medicine in this State must present themselves before this faculty, which is to meet semi-annually, show a diploma from a legally incorporated medical college, and pass a satisfactory examination. They must then register in the County Clerk's office.

The bill thus takes away from the colleges the licensing power and transfers it to an independent board, none of the members of which are connected with any medical college.

There is no question that the sentiment of the profession of the State is unanimously in favor of the objects of this bill. The only thing to be feared is that the proposed board may get into the hands of politicians, and this possibility will have to be carefully looked after. We do not despair of being able to avoid such catastrophe. There is no more pressing necessity before the profession of the State than that of putting some check upon the present practice of pouring annually masses of half-educated stupidity upon us. "If a young man is a dunce, why he is good enough to be a doctor." This is getting to be a common expression among the *commune vulgus*.

Fortunately we have not only moral but legal grounds upon which to demand help from the State. Physicians have to furnish official notices of births, deaths, and the existence of infectious diseases, and are called upon for expert testimony in other capacity. The State must have some proof that these men are competent. Let

the doctors of the State not imitate the apathy of some of their Massachusetts brethren, who fold their hands and say weakly, "Medical legislation has always failed, let us abandon it." Medical legislation has not always failed, and it need not now if physicians will continue to work in earnest.

THE COMMUNICABILITY OF PHTHISIS.

We are told on the authority of the *British Medical Journal* that the most striking and probably most valuable part of the work done by the Collective Investigation Committee has been that relating to the communicability of phthisis. One thousand and seventy-eight replies were received to the circulars sent out. Of these 673 were simple negatives, while 261 replies affirmed the proposition that phthisis may be communicated from the sick to the healthy, and afforded evidence in support of that opinion.

Out of these 261 affirmative replies 192 were accompanied with reports of cases illustrating the communicability from husband to wife or the reverse, and in 130 instances it is stated that no family history of the disease existed in the parties to whom the disease was transmitted.

On the other hand 105 persons testified in their belief that the disease was not communicable.

The facts thus elicited show that a small proportion, probably less than five per cent., of general practitioners have met with evidence which leads them to believe that consumption is contagious. Considering the numerous sources of error in observations of this kind, we can not consider that certainty has yet been reached. If consumption is contagious, it is very feebly so, and the simplest precautions ought to be sufficient to prevent it.

THE TREATMENT OF FRACTURED PATELLA.

The question of the best treatment for fractured patella has recently been brought into prominence. The medical and clinical societies of London at their meetings in November made the matter the subject of prolonged and animated debates, during which some interesting statistics were brought forward by Mr. G. R. Turner and Mr. Bryant. Dr. William Macewen also contributed a paper on the same subject in the *Lancet* of November 17th. The chief point at issue was the adoption of the practice of cutting into the knee-joint, drilling the two fragments, and uniting them by a stout silver wire, the whole being done under the strictest antiseptic precautions. The question further was, whether, admitting that the operation is justifiable in old and intractable cases where the leg is almost useless, it is also justifiable in recent cases. The early operation received the qualified endorsement of Mr. Lister, and the unqualified and earnest support of Dr. Macewen.

The statistics presented by Mr. Turner, however, showed that this operation is not without danger to life and limb, while the statistics of Mr. Bryant and the general experience of other surgeons showed that the treatment of fractured patella by simpler methods was attended with just as good results as was the more radical operation.

The debates on the whole show, as stated by the *Lancet*, that the operation was not suitable as a primary measure, nor for general employment. That when performed the operation should be done with every possible antiseptic measure, and that when, as in intractable cases, it is positively indicated, the earlier the operation is performed the better.

THE PTOMAINES OR CADAVERIC ALKALOIDS AND THEIR SIGNIFICANCE.

It is only of late years that it has been known that a short time after death there may develop in the body certain poisonous and non-poisonous alkaloids whose chemical and physiological action resembles that of the poisonous vegetable alkaloids. The knowledge of this fact is a most important one from a forensic point of view, and no medical man should allow himself to be ignorant of it. A very good summary of what is so far known regarding these substances has been given recently by Mr. R. N. Wolfenden.

Ptomaines begin to develop in the body within two or three days after death. It is said by some that they cannot be isolated in a crystalline form; hence their exact composition is unknown. But they undoubtedly resemble the vegetal alkaloids, and their presence is readily detected by proper tests. The ordinary test first put forward by Brouardel and Boulmy consists in adding a little sulphuric acid to the solution in order to produce a sulphate. A drop or two of a solution of this sulphate added to a solution of ferrocyanide of potassium turns the latter into a ferrocyanide (Attfield), and the mixture then gives a dark blue precipitate with a ferric salt. Unfortunately other alkaloids give this same reaction. A French chemist has affirmed that though we can determine confidently the presence of a ptomaine and of a vegetal alkaloid, yet when the two exist in the tissues it is not possible by present methods to separate the reactions.

Subjected to physiological tests, some of these ptomaines act like strychnine, others like nicotin, muscarin, atropin, etc. The physiological tests are, however, the most important, and are the ones to be finally depended upon.

Some ptomaines seem to act like the venom of snakes, and it is probable that these two classes of poisons are allied in chemical character.

Gautier and Selmi have found that ptomaines exist in the living body in pathological and even in normal fluids. The former observer states that he has found a poisonous (to lower animals) alkaloid in normal urine and in fresh saliva. It remains to be seen, however, that he has not confounded the effect of these alkaloids with that of specific organisms. Selmi has found two poisonous alkaloids resembling conine and nicotin in the urine of patients suffering from progressive paresis. He has also found two alkaloids in the urine in cases of interstitial pneumonia, and two others in cases of typhoid fever. Alkaloids have also been found in the urine of miliary fever and of tetanus. It is suggested that some of the uræmic phenomena may be due to these substances.

Ptomaines vary much in number and character, according to the length of time during which putrefaction takes place. They may be found in all decomposing

animal bodies; for example, "gamey" meat, stinking fish, shell-fish, and lobsters.

The bodies so far described, according to Mr. Wolfenden, are: 1, ptomaines, like atropin and hyoscyamin, which dilate the pupil and accelerate the heart; 2, a ptomaine, from decomposing yeast, which resembles strychnia; 3, a ptomaine resembling morphia in its chemical, but not in its physiological reactions; 4, a ptomaine agreeing chemically with delphinin; 5, a ptomaine resembling, chemically only, strychnia; 6, ptomaines resembling conine, parvolin, and collodin.

The following conclusions present succinctly the practical facts regarding the alkaloids under consideration:

First.—There are developed in the body, post mortem, poisons of an alkaloidal character, and which can be obtained also by decomposition of albumen, peptone, casein, muscle, brain, etc. Moreover, they seem to be present in some normal secretions (saliva and urine).

Second.—These cadaveric alkaloids may be mistaken, post mortem, for vegetal poisons administered with evil intent, but if the body be examined within from twenty-four to forty-eight hours after death, any alkaloid there found would be strong presumptive evidence of poison, and not ptomaine. After a couple of days it may be a matter of doubt.

Third.—There is no satisfactory test surely indicating the presence of a ptomaine. Physiological characters must be taken in conjunction with chemical tests.

Fourth.—Probably the production of ptomaines within the living body may be the pathological cause of many obscure conditions, especially those following on poisoning by bad food, such as stale fish, etc.

BEGGING FOR STUDENTS.

Some very disagreeble disclosures have been brought to light recently in connection with one of the Louisville medical colleges. The *Louisville Medical News* publishes letters which show beyond a doubt that a certain college in that city has been sending out circular letters to medical students, or those intending to be such, asking them to come to Louisville and take a course in the favored college at a reduced rate.

What is still worse, evidence is shown by Dr. James E. Reeves, of West Virginia, that even the very illiterate are welcomed, and no questions as to previous education asked. Under Dr. Reeves' direction a veritable medical student sent as an answer to the circular letter a "made-up" effusion, of which the following is a part:

"Wheeling, W. Va., Aug. 18, '83.

"Doct——

"One of mi Friends who is trying to be a Doct has got a letter from you which says your College is one of the Best College For Medical Teaching in America and that the Feas are cheaper than some other good Colleges and that sutes my circumstance for I am a very poor young man and no matter how much I may Know of Thery of Medicin I cant practice in W. Va. without a Deploma from a good College like the one you have in —— you offerd to take mi Friend for $50 dollars and you will do a poor young man a favor if you will take me at the same Rate for I have that much money I can pay you in cash as soon as I get there," etc., etc.

To which an answer came promptly back inviting the student to come right along.

We regret that such things should occur, for they force us to think that reform in medical education is moving on but slowly. It is, however, some consolation to know that the practices thus going on have been so promptly disclosed, and that public agitation will probably force the school to abandon them or to close up its doors. The censorship of the medical press has done much to check the abuses in medical education, and its influence grows more powerful each year. The profession at large demands honest colleges and an honest educational training of those who are to join its ranks. Our medical teachers are finding that this demand cannot be long ignored.

News of the Week.

Society for the Relief of the Widows and Orphans of Medical Men.—This Society held its forty-first annual meeting last week, when the following officers were elected: *President*—Dr. Isaac E. Taylor; *Treasurer*—Dr. John H. Hinton. Seven managers were also elected. The Treasurer's report showed that the Society numbers 140, of whom 92 are for life, and 42 annual subscribers. The number of benefactors living is 20, of whom 1 is a layman; 32 benefactors are dead, of which number 6 were laymen. The annual members pay $10 initiation fee, and $10 dues per year; the life members pay $100. Benefactors pay $150 or upward. Some of the latter have left large bequests to the organization. The total assets of the Society, September 19, 1883, amounted in value to $143,447.93, all safely invested. Aid was extended during the past year to thirteen widows and four children of dead members. The amount disbursed for this purpose was $4,251.50, and the indispensable expenses for printing, safe, clerk hire, stationery, etc., was $213.38.

Prosecuted for Selling Adulterated Drugs.—In the Municipal Court recently, Rust Bros. & Bird, wholesale druggists, were charged with selling adulterated drugs by the State Board of Health, Lunacy, and Charity. It is understood that this is only the first of a series of prosecutions of a similar character against large manufacturing drug firms. It is stated by the medical officer of the board that in a number of specimens of commonly used drugs obtained from various firms the percentage of the active principle has been found to be very much less than is called for by the United States Pharmacopœia. For instance, citrate of iron and quinine should contain twelve per cent. of quinine, yet its proportion has been found to be as small as $3\frac{75}{100}$ per cent. In tincture of opium, which should contain $1\frac{80}{100}$ per cent. of morphine, the proportion has in some cases run down to five-tenths of one per cent.

Census of the Medical Schools of New York for the Present Season 1883–84.—The number of matriculants at the different schools in the city is about the same as that of last year. At the College of Physicians and Surgeons the number is over five hundred and forty-three; at Bellevue Hospital Medical College not quite

four hundred; at the University Medical College about five hundred and fifty; at the Woman's Medical College about fifty. The number of matriculants at the post-graduate schools varies, but has been not far from one hundred. The veterinary schools are well attended, there being over one hundred students in the two. The total number of students of medicine in the city this winter is between eighteen and nineteen hundred.

Dr. D. W. Yandell, of Louisville, has been elected honorary member of the Medical Society of London. We heartily congratulate Dr. Yandell upon this honor, which he entirely deserves.

The Health Department and Adulterated Teas.—The complaint in the suit of the New York Health Department against a firm in this city for selling adulterated teas was dismissed by Judge O'Gorman, of the Superior Court, last week. It was proven that the tea was extensively adulterated, but it was not shown that the adulterations were injurious to health, and on this ground the complaint was dismissed. The decision is an important one, as showing certain limitations which the present law puts upon the action of sanitary authorities.

Death of Dr. W. B. McGuire.—Dr. McGuire, of this city, died last week, after a lingering illness. He was born in New York and graduated in medicine at the University Medical College in 1871. For some time thereafter he was connected with one of the clinical chairs in that College.

Actinomycosis Discovered in American Cattle.—Dr. William T. Belfield, of Chicago, has made the important discovery that actinomycosis exists in American cattle. He was asked by the Commissioner of Health of Chicago to investigate a disease in cattle which has generally been known as "swell-head," and has been called by veterinarians cancer, sarcoma, etc. Five animals were examined by Dr. Belfield, and a very short study of the specimens under the microscope revealed the true nature of the disease. Actinomycosis was only recognized six years ago by Böllinger, of Munich, who announced that it was a parasitic disease due to the presence of a rapidly growing fungus. It has since been discovered in the hog and in man. It generally first attacks the jaws, and probably gains access to the deeper tissues through carious or defective teeth. It spreads into the tissues of the head, causing tumefactions, suppuration, finally, if unchecked, pyæmia, and death. It may gain the blood and be transferred to other parts of the body. This happens especially with man, upon whom the parasite acts most virulently. It is supposed that its source is the grain with which animals are fed. The disease is generally fatal, though prompt measures may check it. The meat of animals dying from actinomycosis is not of first quality. It is not, however, yet known that it is absolutely injurious. Thorough cooking, at any rate, destroys the parasite. Dr. Belfield's discovery is an important one, and should become promptly known to veterinarians and sanitary officials.

Enterprising Undertakers.—It is rare, we are told, that any nationality exceeds the American in business activity and enterprise. We must yield the palm to the London undertakers, however. We do not think that even in this much maligned city the business instincts of our mortuary artists would exhibit themselves as, according to the *Lancet*, has been done in England. That journal annotates as follows: "Medical men are from time to time insulted by the overtures made by enterprising undertakers with a view to obtaining their recommendation to the families of deceased persons; but few proposals so unblushingly impudent as that recently made by a London undertaker to the members of the medical profession, by means of a lithographed letter, marked 'private and confidential,' are happily known to history. The tradesman who has not scrupled to issue this trade circular has the audacity to offer practitioners a commission ranging from five to twenty per cent. according to the amount expended on the funeral; and to facilitate matters, he adds, 'It will not be necessary in any case for you to wait upon me with reference thereto [that is, the receipt of the commission], but simply to send a line to say you attended the deceased, as no inquiries will be made beyond this.' We call attention to the matter, at the request of several correspondents, to mark the sense of the profession at the insult it has received, and to deter this particular tradesman—and others—from repeating the affront."

Science a Peace-maker.—It is pleasant, says the *British Medical Journal*, in these times of political squabbling and dishonorable jealousies, to see science step in and disperse national animosities as effectually as it removes vulgar errors and diffuses world-wide truth. On the sad occasion of the death of M. Thuillier, Herr Koch, Director of the German Cholera Commission, and all his colleagues, promptly expressed regret and sympathy, and also their desire to be useful. On his coffin they nailed laurel-wreaths. On the day of the funeral M. Koch officiated as a pall-bearer. This graceful act of humanity was feelingly appreciated by the members of the Pasteur Commission, who described it as "un hommage précieux et touchant." We confess that we cannot see anything so remarkable and touching in the above acts. M. Koch and his colleagues would simply have been brutes if they had done any less.

The Fight against Quacks in Missouri has begun in Kansas City, by the Board of Health refusing to recognize the diploma of a certain graduate of the "Cincinnati Health School." The graduate in question applied to the courts for a mandamus to compel the Board to recognize this diploma. We are not yet informed of the issue.

A Medical Society vs. a Medical Journal.—At the recent meeting of the District Medical Society at St. Joseph, according to the *Weekly Medical Review*, an attempt to boycott the St. Joseph *Medical Herald* was made. It seems that the *Herald* took occasion to criticise the action of the society in allowing members to bring personal quarrels before the society to the exclusion of scientific questions. In addition to this the *Herald* spoke rather decidedly on the propriety of giving an entire session of the society to a St. Louis medical man, who delivered a lecture on his own specialty. Resolutions censuring and condemning the *Herald* were offered, but were hardly read before a motion to table was carried. This action so enraged the champions of the

resolutions that they launched out in speeches more forcible than elegant, and finally the climax of disorder was reached when one of the members and the editor of the *Herald* came together. The scene became very lively for a while, but the members were at last induced to quiet down.

Dr. Bradley S. McCabe, President of the Greene County (N. Y.) Medical Society, has been chosen to represent his county in the Assembly. The more of such men the better.

Testimonial to Mr. Jonathan Hutchinson.—The students and graduates of the London Hospital have subscribed the sum of $2,000 as a testimonial fund for Mr. Hutchinson. Fifteen hundred dollars of this has been set apart as a fund for a biennial prize essay on clinical surgery. The remainder was devoted to the purchase of a personal testimonial, which was formally presented to Mr. Hutchinson on November 29th.

Death of Dr. G. S. Pfeiffer.—Dr. Pfeiffer, of Camden, N. J., died at his residence in that place on November 28th, aged seventy-seven years. He was a gentleman of extensive scientific knowledge, speaking seven languages, and he had written several non-medical works. He was a member of the Historical Society of Pennsylvania.

The Museum of Hygiene at Washington.—The Army Medical Department has already achieved a world-wide reputation for its work in medical bibliography, for its library and pathological museum. The Naval Medical Department soon bids fair to rival it in the direction of hygiene. It has already collected a library of over five thousand volumes, chiefly of works relating to sanitary science. Its museum of hygiene is growing and already contains two hundred and sixty-four exhibits. The American Public Health Association has made it its permanent repository. We are informed that the Surgeon-General requests contributions of articles, appliances, models, drawings, etc., illustrating improvements in food, water-supply, bedding, clothing, marine architecture, house and hospital construction and furniture; apparatus for heating, illuminating, ventilation, and removal of excreta and refuse; culinary, laundry, and bath facilities; appliances for physical culture and exercise; and whatever else tends to the preservation of health and the prevention of disease. The exhibits are properly credited by descriptive labels to the persons contributing them.

Sanitary Condition of the Public Schools.—The Health Commissioners have decided to expend $6,000 in making the most needed improvements in the public schools, leaving the rest till next summer. But what about the health of the children in the meantime?

Monck, the Brooklyn Charlatan and Faith Healer, has been indicted and convicted of deception and malpractice. He had acquired an immense popularity among the women of Brooklyn, whom he treated for all kinds of diseases, and by most extraordinary methods.

A Society for Hospital Administration.—An association is to be formed in London for the purpose of studying subjects connected with hospital administration. More definitely, the objects of the proposed association are, firstly, to facilitate the consideration and discussion of matters connected with hospital management; and, where advisable, to take measures to further the decisions arrived at; and, secondly, to afford opportunities for the acquisition of a knowledge of hospital administration, both lay and medical. The association, moreover, proposes to afford facilities for the reading, discussion, and publication of approved papers; for the delivery of lectures, and for the holding of conferences on hospital administration, hospital management, medical relief, medical education in relation to hospitals, free and provident dispensaries, and other kindred subjects, and will found a library, consisting of works on hospital administration, construction, finance, and statistics.

Yellow Fever at Havana.—Clean bills of health were issued, after inspection by Sanitary Inspector Burgess, to vessels from Havana bound to United States ports during the week ending November 17th: American steamer Hutchinson, for New Orleans; American steamer Niagara, for New York; British steamer Marco Aurelio, for New Orleans; Spanish steamer Santiago, for New Orleans; British steamer British Empire, for New York. Dr. Burgess states that the above-named vessels were all in the open bay and had not been to the wharf. In a letter to Surgeon-General Hamilton he says that at no time during the year has so large a proportion of sailing vessels suffered from yellow fever in the harbor at Havana as at the present, and that there are about seventy-five cases of the disease in the city, among them the recently appointed Captain-General, Castillo, who is now convalescing, having been attacked about two weeks ago. Total number of deaths from yellow fever during the week, 18.

Yellow Fever News from Mexico indicates that the disease still continues in the towns of Manzanillo and Acapulco, though rapidly disappearing. There is an epidemic of scarlet fever in Pueblo, which, Assistant Surgeon Main, of the Marine Hospital Service, states, gives more alarm than did yellow fever. Quarantine restrictions have been removed at Matamoras as well as at Brownsville, Texas. At the former city a large lagoon nearly surrounding the town has been drained, thereby causing much malarial fever. The news from Havana continues unfavorable, as the weather is so warm that yellow fever has had little or no check. There were twenty deaths for the week ending November 24th, and several infected vessels sailed for the ports of Savannah, Pensacola, New Orleans, and Charleston.

The Medico-Legal Society.—The annual election of this Society, held December 5th, resulted as follows: President, Clark Bell, Esq. (third term); Vice-Presidents, Dr. R. O. Doremus and D. C. Calvin, Esq.; Secretary, L. P. Holme, Esq.; Treasurer, A. D. Hammersley, Esq.; Curator, Dr. A. H. Smith; Chemist, Professor C A. Doremus.

The Orthopædic Hospital and Dispensary held its annual meeting December 5th. The report of the previous year shows the institution in a prosperous condition. Over fifteen hundred patients were treated, of whom four hundred and fifty were either entirely or partially cured. Fourteen beds were endowed for one year.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

ABSCESS OF THE ANTRUM CAUSED BY AN EXTRA TOOTH.

DR. JOHN A. WYETH presented a tooth removed from the superior maxilla of a woman, twenty-six years of age, who came to him with trouble in the antrum of Highmore on the left side. She stated that *thirteen* years previously she had scarlet fever and measles, and since then had had painful sensation at times in the region of the antrum. In order to relieve the pain a dentist had been induced to extract a tooth, and through the opening thus made a discharge of pus occurred, and the purulent discharge had continued in variable quantity, but never ceasing entirely, for seven or eight years subsequently. Dr. Wyeth extracted two more teeth from the same side, and gave free drainage to the antrum. He also removed some particles of bone, and through the opening a tooth was discharged which, according to count, was an extra development in the superior maxilla. It had grown inward, and finally dropped into the antrum, where it acted like a foreign body. The discharge ceased for a time after the tooth came away, but it had recurred and Dr. Wyeth thought that dead bone yet remained, which he proposed to remove entirely by opening the antrum more freely. He regarded the cause as a very unusual one for the formation of pus in the antrum.

DR. GEO. L. PEABODY presented specimens illustrating

EMBOLISM OF THE BASILAR ARTERY—EXTENSIVE VALVULAR DISEASE OF THE HEART, WITH HYPERTROPHY AND DILATION—PERICARDITIS—DIFFUSE NEPHRITIS

J. C——, twenty-two years of age, United States, single, mechanic, was admitted to the New York Hospital July 7, 1883. His mother died of heart disease; the rest of his family are alive and well. He had rheumatism two years ago, but subsequent to that time he remained pretty well until ten weeks ago, since which date he has had dyspnœa, cardiac palpitation, swelling of the feet, headache, and tinnitus aurium. These symptoms have steadily increased in severity, and now he can hardly walk about, and is very short of breath. He gives no history of urinary symptoms. He gives a well-alcoholic history. He had at this time fluid in both marked pleural cavities and in his peritoneal cavity, and also œdema of the lower extremities. His temperature was normal; his pulse was irregular; the apex beat diffused, and a loud systolic murmur was heard over the apex. His urine gave the following record: specific gravity, 1.014, pale, acid, large amount of albumen, granular and hyaline casts; thirty ounces passed per diem. He was treated after various routine methods, with some improvement. His urine increased greatly in amount. After two weeks' hospital residence the character of the murmur changed. Instead of being a *loud systolic* murmur it became a *loud musical murmur heard with both sounds* of the heart. He improved from time to time, passed more urine, slept better, ate better, was able to go about, etc., and then he got worse again, as such subjects do.

The œdema became so great in his foreskin that puncture was resorted to with relief. His abdomen was tapped, between September 6th and October 20th, seven times, and clear serum withdrawn on each occasion, varying in amount from sixty to two hundred and sixty ounces. About the middle of October he complained of much pain in the precordial region.

On October 20th he became very silly without warning, restless, resisting efforts on the part of attendants to keep him in bed, refusing to speak at all, and merely staring fixedly at any one who addressed him. His heart's action increased in irregularity; he had diarrhœa; he lost control over his bladder and rectum. For the two following days his restlessness increased, and he was inclined to be noisy. Anasarca became excessive. In the evening of October 22d he became very noisy and violent. Hypodermic injections of morphia and hyoscyamia were ineffectual in controlling him, and it became necessary to put him in a strait-jacket and remove him from the ward. His temperature did not rise above normal. He shouted and struggled all night. On the following morning he resisted all efforts at medication or nourishment, and it became necessary to feed him by means of a stomach-tube.

On October 24th he became less noisy, but his general condition remained without change. His urine diminished in amount to fourteen ounces, but it became possible to return him to his ward and remove his strait-jacket. On this evening he suddenly became very quiet; sank into a condition of stupor. At 11 P.M. pulmonary œdema developed, which was temporarily relieved by cupping, but he died at twenty minutes after midnight, October 25th.

Dr. Peabody presented a portion of the base of the brain, including the pons with the basilar artery attached, and also the heart.

Autopsy.—Brain: Just behind the anterior border of the pons the basilar artery was seen to be plugged by a firm clot, whose centre was partly decolorized. The entire lumen of the vessel was obliterated and the artery was somewhat distended at this point. The brain was everywhere somewhat softened by post-mortem change, but its structure was nowhere pathologically altered. The lesion spoke for itself and needed no further description. The peritoneum contained two litres of clear serum. There was no evidence of peritonitis. The height of the diaphragm on the left side was at a level with the sixth rib; on the right side, with the fifth rib. The heart was large. Both ventricles were markedly dilated. The endocardium of the left ventricle was much thickened. The attached borders of the aortic cusps were also thickened. But the chief lesion of interest was in the mitral valve; both of its cusps were markedly thickened and stiffened, and their surfaces were very rough. Upon these roughened surfaces in the fresh state one could see many little vegetations attached, some of fibrin, others, older, of connective tissue. It was not difficult to imagine these as the origin of numerous emboli. One of the chordæ tendinæ had been eroded and now terminated free in the cavity of the ventricle, and had upon its extremity a large mass of connective tissue and fibrin. The lungs were both retracted and were everywhere adherent to the chest-wall. Over the posterior and upper surface of the lower lobe of the left lung was a layer of recently exuded lymph, three inches in diameter and irregularly circular in shape. Corresponding with this area was the base of a hemorrhagic infarction of dark red color and about the consistency of a hepatized lung. The right lung was œdematous and congested, and exhibited the lesion known as brown induration. The spleen was large and had an old decolorized infarction in the upper border. The capsules of both kidneys were adherent; surfaces of both were granular. They had the peculiar firm consistency of so-called "heart kidneys." The cortex was thin, its workings indistinct, and its surface presented the scars of several old infarctions. The liver was large. The centres of the acini were pigmented and their peripheries were anæmic.

Remarks.—There are several points of interest in this case. The lodgment of an embolus in the basilar artery is unusual, and it seems strange that a plug which has passed through a small vessel should lodge in a larger one. The patient was young, and there is no change in his arteries such as might have suggested a local cause for the arrest of the embolus. The stoppage of so large a vessel would, of course, be attended by serious interference with the nutrition of the parts supplied

by it, were it not for the abundant anastomosis. In this case there was no softening, but there probably was some temporary disturbance of nutrition when the functional cerebral disturbances occurred, as noted in the history. The color of the embolus led me to suppose that it had existed only a few days, and it seems fair to infer that its lodgment coincided with the man's delirium. On the other hand, the possibility of the dependence of the cerebral symptoms upon the kidney lesion must be admitted.

Referring to the heart, the change in the character of the mitral murmur is very interesting in connection with the lesion of a tendinous cord that you see here. Unfortunately, we have no means of dating exactly the occurrence of this lesion.

DR. WYETH asked Dr. Peabody what he regarded as the immediate cause of death.

DR. PEABODY answered that with such a number of diseases, any one of which was incurable, it was difficult to determine what the immediate cause of death was.

DR. WYETH said the reason why he asked the question was because he had already presented two specimens of embolism of the basilar artery, and in each instance the immediate cause of death was attributed to disturbance of the nutrition of the pons and medulla. There had been in all about twelve cases reported, and in each the immediate cause of death had been assigned to malnutrition of the pons and medulla. Dr. Wyeth had proposed to ligate both vertebral arteries in two cases of epilepsy, acting upon the theory that miliary aneurism of the medulla and pons was the most constant lesion in that disease, but at about that time the two patients died from the bodies of whom he obtained the specimens of aneurism of the basilar artery he had presented, and he was deterred from performing the operation.

Since then, Dr. Alexander, of Liverpool, has performed the operation in ten or eleven cases of epilepsy, sometimes ligating one and sometimes both vertebral arteries, and in all the cases the patients had recovered from the convulsions. Dr. Wyeth also had tied one vertebral and the patient did not die of disturbance of the nutrition of the pons and medulla, but of pneumonia four days subsequent to the operation.

IVORY EXOSTOSIS FROM THE ETHMOID CELLS.

DR. H. KNAPP presented a specimen with the following history. He removed it from a woman forty-five years of age, apparently in robust health, except that she had suffered from nasal polypi for fourteen years. Twelve years ago these polypi were, for the first time, removed. In the course of years four more such operations had been performed, the last one being about two years ago, after which they grew much more rapidly than ever, and six weeks ago both nostrils were occupied, the left almost completely and the right to a considerable extent. There was at the inner side of the left orbit a hard tumor, apparently about the size of a filbert, which crowded the eyeball toward the temple and somewhat forward, produced a slight degree of congestion and folding of the retina, but vision was still good. There was no evidence of cerebral disease. Dr. Knapp advised removal of the polypi slowly, which was done by Dr. R. P. Lincoln, who extended the operations over four or five weeks. The growths were soft and to some extent fibrous. Dr. Knapp thought that the hard orbital tumor, felt through the skin, was either an osteoma or the bony shell of the expanded ethmoid cells, which it would be easy to break down, and so allow of the removal of the remainder of the polypi from that side. He was quite confident that the remaining polypi could not be removed by either the anterior or posterior nasal passages. So he believed that opening the lateral part of the nose by removing the bony tumor would give easy access to the polypi. The hard tumor was laid bare by an incision carried down to the periosteum, and then with the end of a small chisel he removed all the periosteum from the nodular surface of the bony growth. When this was completed he seized one of the projecting parts of the growth with a strong bone forceps and soon found that it extended through the os planum into the ethmoid cells, and also was fastened to the nasal septum. Without the exertion of very much force, however, it was removed, and with only the slightest amount of injury to the tissues. He did not expect that any serious reaction would follow the operation. The left frontal sinus was also opened. It contained a large gelatinous polypus, which was removed. He also very carefully explored the frontal sinus with a sharp spoon, but detected neither carious bone nor other tumors. The external wound was closed completely, as free drainage could occur from the inside.

The patient did perfectly well during the first twenty-four hours, but then complained of headache, which was followed by somnolency that increased, accompanied by rapid pulse and marked elevation of temperature (104.5° F.). She died comatose on the fourth day after the operation. The autopsy was made by Drs. Prudden, Lincoln, and himself, and he asked Dr. Prudden to demonstrate the condition of the brain.

DR. T. MITCHELL PRUDDEN said the brain had been frozen, and therefore its natural color had been changed. The dura mater was perfectly normal. On removing it, the pia mater covering the right side of the concavity of brain was found completely infiltrated with pus, especially along the large vessels. The meshes of the pia, as well as the space beneath it, were so filled with serum that the convolutions were considerably flattened. Upon the side of the operation (the left) there was much less purulent infiltration than upon the other, but it was well marked in a zone about an inch wide extending along the course of the longitudinal fissure. There was some infiltration of purulent matter along the vessels at the base of the brain. The brain tissue was hyperæmic. The fluid in the lateral ventricles was somewhat increased and stained red. There was no lesion of the inner table of the skull. There was no evidence of direct transmission of the inflammatory process from without inward.

DR. KNAPP also exhibited a portion of the skull, removed so as to expose the ethmoid cells, which he found plugged with polypi. It also revealed that at the site of the operation there was no irritation or inflammation. The external wound had healed by first intention. The eyeball was healthy. The sphenoid cells also were plugged; the right with a clot, probably from the operation, and polypi, while the left was completely filled with cheesy pus and its communication with the ethmoid cells was obstructed by polypi. The bulk of the tumor had an ivory consistence, its centre was somewhat cancellous.

Dr. Knapp believed that the proper way to remove these tumors was by the subperiosteal enucleation. He regarded the fatal result in this case as due not to the operation, but to the diseased condition of the ethmoid and sphenoid cells, and that the operation only rendered active a condition which would have inevitably sooner or later terminated fatally.

With regard to the treatment of nasal polypi, no human hand could have removed them in this case. He urged that if the deep-seated of these tumors are to be dealt with at all they should be removed *early*; the same rule applied to exostoses.

VESICULAR HYDATID MOLE

DR. C. HEITZMAN presented a specimen, for which he was indebted to the kindness of Dr. Danforth. As is usual, the patient had profuse hemorrhage, and as always occurs, the ovum was destroyed. He accepted Virchow's view concerning the character of the growth—namely, that it is a myxomatous degeneration of the villosities of the chorion.

DR. H. J. GARRIGUES recalled an article written by Maslowsky, a Russian physician, who had found phlebitis of the umbilical vein with formation of thrombi on the walls and consequent diminution of lumen. He takes

this to be the origin of the evil, and the changes in the chorion, decidua, and fœtus to be secondary. In consequence of the damming up of the blood the vessels persist in those villi in which normally they are destroyed, those outside of the placenta, and a transudation takes place into the stroma of the villi. Later thrombi are formed in the capillaries of the villi, and they undergo a regressive change and the vessels are destroyed. The decidua showed chronic inflammation, namely, connective tissue instead of the characteristic decidua cells, and extravasation. The fœtus was well formed, but much too small for the period of development (*Centralblatt für Gynäkologie*, 1882).

Dr. Garrigues also remarked that the fœtus did not die in all cases, for a celebrated obstetrician, Hohl, was said to have been developed in an ovum part of which formed a hydatid mole.

DISCHARGE OF SEROUS AND BLOODY FLUID FROM THE NIPPLE—CARCINOMA OF THE BREAST.

Dr. A. G. Gerster presented a very small nodule removed, together with the breast, from a woman sixty-one years of age, who had borne nine children, all of whom she had nursed. Her nipples used to be sore occasionally, but not frequently, and she never had a mammary abscess or any serious inflammation of the gland tissue of either breast. Dr. Gerster saw her first in the latter part of May, when she applied for relief from a serous and bloody discharge from the nipple. A most careful examination of the breast failed to reveal any tumor proper. The axillary glands were normal. He expressed the suspicion that a malignant process was beginning, although the skin was apparently healthy and the nipple was not retracted. Being absent from the city he did not have opportunity to examine the patient again until the first of October, but was told that the aspect of the case had not changed. At that time, however, he was surprised to find a large mass of hard glands in the axillary space, requiring very careful dissection, on account of its close adherence to the sheath of the axillary vein. After removal of the breast a very small non-incapsulated nodule of cancerous tissue was found in its outer lower quadrant. He presented the specimen on account of this peculiar fact, observed in three cases, namely: with a very small but infiltrated breast tumor he had found a disproportionately extensive involvement of the axillary glands, which rendered an otherwise simple operation rather difficult, and made the prognosis a very doubtful one.

Dr. Heitzman said he had in his collection a specimen of primary cancer of the axillary glands. Recently Paget had directed attention to certain forms of eczematous affection of the nipple followed by cancer in which also the lymphatics are involved very early. He thought Dr. Gerster's case resembled this class.

Dr. Wylie remarked that in some cases tender spots could be made out where no enlargement could be felt.

Dr. Gerster further stated that he considered the removal in one mass of the entire contents of the axillary space—fat, glands and all—to be imperative, since the smaller glandular bodies of about the size of a hempseed cannot be felt through the integument and fascia, and can be made out only with difficulty even after the fascia was opened. Where the infiltration of the axillary glands can be distinguished through the integuments, the involvement is very extensive indeed, and a difficult dissection may be expected.

STRUMOUS ARTHRITIS OF THE KNEE-JOINT—AMPUTATION.

Dr. Gerster also presented a part of one of the lower extremities of a child two years old, removed by amputation, and with the following history. The patient had suffered from strumous disease of the knee-joint for some time, when it was suddenly taken with high fever, and the family attendant said it was due to a sprain and ordered poultices, the result of which was an extension of the phlegmonous inflammation up and down the limb, with perforation of the capsule. The child's life seemed to be in imminent danger, and amputation was immediately performed. Dr. Gerster was compelled to operate through inflamed tissues. A strong solution of the bichloride of mercury was used, 1 to 500, and although a part of the long anterior flap necrosed, a considerable portion of the amputation-wound healed by first intention, even parts which had been the seat of an active phlegmonous process.

Dr. Heitzman remarked that, before the time of antiseptic treatment, it was known to surgeons that even tissues which were the seat of strumous inflammation were prone to primary union after either resection or amputation. He did not know as Dr. Gerster would insist that the favorable result in his case was due to the use of the strong solution of the sublimate.

Dr. Gerster said he could not help believing that the result was due to the use of the sublimate solution, as he had amputated under similar circumstances several times, and had seen new phlegmonous conditions develop. It was an old and established principle in surgery to operate in healthy tissues, and that when surgeons were obliged to operate in tissues the seat of active septic conditions, the peculiar condition was apt to invade other parts, and very frequently terminate fatally.

CANCER OF THE ŒSOPHAGUS.

Dr. Henschel presented a specimen removed from the body of a man, aged seventy-three, who for some time suffered from dyspeptic symptoms, with distressing eructations, and finally came under Dr. Henschel's care, who induced him to take fluid food only, which he did for a few months, with so much benefit that he gained considerably in weight. The former symptoms then returning with ejection of the fluid food, Dr. Henschel introduced an ordinary œsophageal bougie, and found an obstruction which he was unable to pass. About three months later Dr. Janeway saw the patient with him, and at that time swallowing could not be heard below the *second* dorsal vertebra. The patient had then lost nearly seventy pounds in weight. Some days afterward Dr. Henschel again introduced the bougie, for the purpose of ascertaining, if possible, the exact situation of the obstruction, and with the view to dilatation.

Two days subsequently the patient spat up two large quantities of blood. Soon after that his condition began to improve, and he took milk freely, but the dulness to the right of the sternum increased. He gained in weight twenty-five pounds and remained quite comfortable until recently. On October 29th an attack of pleurisy developed over the lower lobe of the right lung, but the symptoms subsided within a few days and he was up and quite cheerful when, on November 4th, bronchitis began. On November 5th a gurgling was heard at about the middle of the lower lobe, as though the lung was breaking down. On the following day typhoid symptoms developed, the patient became unconscious, and on the next day that side of the chest was completely filled with fluid. The patient died on November 9th.

Autopsy seven hours after death revealed constriction of the œsophagus by carcinoma, which had invaded the right lung, and the pleural cavity was completely filled with fluid, which had an odor as if from the stomach. The kidneys were fatty, although during life neither albumen nor casts were detected in the urine.

Dr. Peabody said it was interesting to find an opening through the œsophagus communicating with the pleural cavity, with partly digested pleura and lung. There had been regurgitation of the contents of the stomach, and this digestion had taken place after death, probably.

(To be continued.)

Correspondence.

OUR PARIS LETTER.

(From our own Correspondent.)

THE LONGEVITY OF ACTIVE SCIENTIFIC WORKERS—WORK IN OLD AGE AS A PREVENTIVE OF DECAY—RUMINATION AS A SYMPTOM OF INSANITY—COMPARISON OF MENTAL ACTIVITY IN BOYS AND GIRLS—THE MORTALITY OF TYPHOID—ETIOLOGY OF TYPHUS—THE THEORY ABOUT MICROBES.

PARIS, November 9, 1883.

M. BENOISTON, of Châteauneuf, published some years ago a curious article on longevity among the members of the Institute. Unfortunately the work has not been continued. But in the "Annuaire de l'Institut," for 1883, we still find a great many long-lived members. The following is a list of the senior members whose elections to the Institute date prior to 1840: Chevreul, of the Academy of Sciences, elected in 1826, entered his ninety-eighth year on August 31st last; Jean Baptiste Dumas, of the same academy, was elected in 1832, now aged eighty-three; Mignet, of the Academy of Moral and Political Sciences, elected in 1832, now aged eighty-seven; Charles Lucas, of the same academy, elected in 1836, now aged eighty; Henri Milne-Edwards, of the Academy of Sciences, elected in 1838, now aged eighty-three; Augustin Dumont, of the Academy of the Beaux-Arts, elected in 1838, now aged eighty-two; Barthélemy Saint-Hilaire, of the Academy of Political and Moral Sciences, elected in 1839, now aged seventy-eight.

M. Bouchardat, Professor of Hygiene at the Paris Faculty of Medicine, protested in strong terms, at a recent lecture, against the advice given by some hygienists who recommend almost complete rest to the aged, in the following terms: "I protest against the oft-repeated adage that old age is the age of rest. This sentence has led to a very great error in hygiene. The regular general exercise of all the organs of nutrition and of locomotion is necessary to persons of all ages.

"The greatest attention on this point is all the more necessary that the tendency to rest brings on a gradual diminution of the strength. If the old man does not resist, his strength will visibly and progressively diminish, and the few days that he may have to live may be transformed into so many hours. In proof that regular daily exercise is beneficial to the aged, one has only to observe the results in some of the handsomest old men, who take little or no rest. Moderate exercise, particularly walking, should be the leading precept of the hygiene of the aged, without which longevity is impossible." Professor Bouchardat also recommends that old people should maintain their intellectual faculties, or otherwise they would get into a state of incurable torpor.

At a meeting of the Société des Sciences, Dr. Bouchaud, of Lille, drew the attention of the society of that city to a pathological condition more common in the insane than is generally believed, viz., rumination. At the asylum of Lommelet there were fourteen patients that ruminated, eleven among the idiots, of whom there were about a hundred, and three among the other five hundred and seventy inmates of the asylum. Several of these patients were reported to have ruminated long before they presented any signs of insanity. This symptom must therefore be considered of some importance whenever such cases present themselves.

In an interesting work on the studies of children, it has been brought to notice that in a large establishment containing about six hundred children, half girls, half boys, it was remarked that the girls furnished industrially work superior to that of the boys. At each periodical inspection it was also remarked with some surprise that they were mentally more alert, more developed. The following was the explanation given for the difference between the two sexes: The girls were not so assiduous at their studies, for which they devoted only eighteen hours a week, the days for working at the establishment alternating with those at the school. The boys, on the contrary, devoted thirty-six hours a week at the school. To remedy this difference, the boys were submitted to the same rules as the girls, and the result obtained was as satisfactory.

The Paris Society for the Protection of Animals has submitted a petition to the Chamber of Deputies, requesting that bull-fights should be put a stop to, as being contrary to the principles of a civilized people, as exercising a deplorable influence on the delicacy of sentiment in the women and children, and often causing disturbances and serious accidents.

Dr. Worms, member of the Council of Hygiene of the City of Paris, lately drew up a report on the mortality caused by typhoid fever during the past four years. In 1879 there were 1,110 deaths; in 1880, 2,120; in 1881, 2,121; in 1882, 3,403. Dr. Worms remarks that in taking into account the increase of the population, the mortality from typhoid fever was fifty per cent. greater than it had been the fifteen preceding years.

Professor Bouchardat does not believe in microbes, at least, so far as they are concerned in the genesis of parasitic or contagious maladies. At the last meeting of the Academy of Medicine, the learned professor developed the subject, and gave in support of his theory the etiology of typhus fever. The following are the conclusions of his communication: 1. The parasite of typhus fever does not exist everywhere. 2. They originate by the transformation of normal organites (M. Bouchardat applies the term organites, the elementary figured elements which enter into the constitution of liquids or solids of the divers organs of an animal), following the debility arising from the continuation of famine or of typhigenetic affections. 3. The parasite, in evolving from the bodies of the famished, or from patients attacked with typhigenetic affections, is at its maximum strength; it does not propagate itself at a distance; it is very dangerous for those who approach patients suffering from typhus; the danger increases with the number of patients. 4. The parasite modifies itself in its nocuity, in its mode of action on the human economy, by a succession of transmissions, as it becomes definitely extinct. Professor Bouchardat adds that one ought to avoid, above all, to crowd patients, such as victims of famine, or those attacked by typhigenetic affections. The physicians, sisters, and nurses ought to take the greatest precaution against the danger that the parasite subjects them to, and these precautions should be taken as well during the night as during the day. One of the most imperious duties of a government is to prevent famine in all the regions that it governs. In conclusion, the hygiene of typhus has a history assured when it is founded on the notions furnished by clinical observations on the genesis and propagation of the parasite. No useful indication results from the hypothesis that this parasite exists everywhere. Everything is hidden and obscure with the Pasteurian theory of the existence of the parasite everywhere; all is easily explained, on the contrary, in admitting that the patients are the foci of the genesis and propagation of the parasite.

Whatever may come of M. Pasteur's theories about microbes, it may be observed that the lamented death of Dr. Thuillier, one of the French cholera mission to Egypt, would seem to be a flagrant contradiction of those theories, as well as of the absurd notions propounded by Dr. Burq on the microbicide influence of copper, as we learn from the statement made by the surviving members that Dr. Thuillier, not only implicitly carried out the instructions given by M. Pasteur for their protection, but he was the only one of the mission that had saturated himself with copper before setting out for Egypt.

THE CHANCES OF THE YOUNG PRACTITIONER AS AFFECTED BY THE ADVICE GRATIS AND SMALL FEE SYSTEMS.

To the Editor of The Medical Record.

Sir: It was with a feeling of gratitude, shared, I am convinced, by many of my young *confrères*, that I read your editorial headed "The Chances of the Young Practitioner as Affected by the 'Advice Gratis' and Small Fee Systems."

There have been occasionally sporadic denouncements of the injustice done, especially the younger practitioners in this city, through the misapplication of medical charity, but everybody went to sleep again on the subject after such a feeble effort.

My only reason for asking a little of your valuable space is in the interest of our profession, which in this city is verily going to seed under the present *régime*. I hope that these few lines of a poor advocate may stimulate better talent among our young practitioners to do something for themselves in the way of agitating the means of bettering their condition.

It is, to a very great extent, our own fault that free clinics are so numerous, for most of the workers are young men. The great majority of us think it an honor to be attached to Professor N. N. as thirty-second junior assistant. The former gets the renown and free advertisement, while we get the drudgery and the doubtful benefit of figuring in multitudinous advertisements of a free clinic. Now, the dispensary doctor is a title looked on by the majority of people as a title of incompetency, as though such a physician had not totally absolved his curriculum of study, and is glad enough to give his services gratis in consideration of the variety of diseases to be seen and studied by him.

I hope the young practitioners of this city will keep on agitating this matter, now that it has been fairly started in your widespread journal, and bring it up persistently again and again, until either the Great Moguls of the medical profession in this city will find a remnant of the justice and fair play due their former disciples left in their consciences, feel ashamed of their grasping avarice, and turn away people in comfortable circumstances; or, what is perhaps easier to bring about, that some protective means be suggested by the younger members, either as a society or by individual agitation, against *indiscriminate* almsgiving in our dispensaries, polyclinics, and especially our colleges. This will have to be done sooner or later, and I think the time is at hand to make some earnest efforts for correcting this evil.

It is imperatively demanded by the large strides that these institutions are making every year, under the guise of philanthropy and charity, as it is put, not only toward the poor of the city, but also as an act of charity toward graduates and practitioners, who, it is said, could not otherwise keep up with the times, for want of clinical material and opportunity. This latter proposition will seem to any unprejudiced thinker as absurd. These gentlemen will always find plenty of worthy poor wherever they be located, whom they can treat gratis to their heart's content.

In unity there is strength. We are the majority. All we need is a few firm and intrepid leaders. Who will lead?

One of Them.

DULNESS OF HEARING IN TYPHOID FEVER.

To the Editor of The Medical Record.

Sir: In reading carefully the very instructive and interesting paper of Professor Delafield, recently published in the columns of your paper, entitled "Typhoid Fever in New York City," I am struck with the absence of one symptom in the one hundred and two cases he has so carefully collated, viz., dulness of hearing.

In all the typhoid patients it has been my privilege to treat, it has been present in all but one. This exception was a very mild case in which the temperature was normal or subnormal nearly the whole time, and the patient was bright and natural in appearance.

So common have I found this symptom, that in those atypical cases where I was in doubt as to the nature of the disease for the first week, the sudden appearance of partial deafness has made it clear to me that I had a case of typhoid fever to deal with, and the subsequent course of the disease has proven that I was correct.

Whether or not dulness of hearing is often seen in the ordinary malarial fevers that run a course of several days, I am not able to say. Certain it is, that living in a malarial district and having such cases nearly all the time to treat, I do not call to mind one instance where this symptom appeared. Of course, I exclude such cases where deafness has followed the giving of large doses of the cinchona salts.

Now, in turning to distinguished authors and teachers, I find that most of those I have had opportunity to consult mention impaired hearing as one of the symptoms of typhoid fever, but not with the same degree of emphasis. Niemeyer says: "In the second week of the disease the complaints of pain in the head and limbs cease, but the dizziness becomes worse and the noises in the ears are accompanied by deafness."

Da Costa says: "Early in the disease ringing in the ears and dulness of hearing is encountered."

In "Reynolds' System of Medicine" the author of the article on typhoid fever says nothing of deafness, but Dr. Reynolds inserts in brackets, "dulness of hearing is almost invariably present."

Dr. Alonzo Clark says: "After the first week hearing is lessened, not absolute deafness, and just before deafness ringing in the ears."

Dr. James C. Wilson, in his book on "The Continued Fevers" in Wood's Library of 1881, says: "Deafness is very common. . . . It commonly appears toward the end of the second week."

None of the authorities above quoted give the relative frequency of this symptom, except Wilson, who says: "Deafness is very common." But all of them that are at all definite place the commencement of the symptom in the second week, or after the first week.

It is possible to diagnose a typical case of typhoid fever a few hours after the initial chill or chills, but as in these days of atypical diseases we often have to tell our patients that we will have to wait awhile before deciding as to the nature of the malady, it therefore behooves us to note carefully whether there is any one symptom more constant than others in such a dreadful disease, in the minds of the laity, as typhoid fever.

In my own experience this symptom has appeared somewhere in the second week, never in the first, and its disappearance has always been the commencement of the patient's improvement.

If none of those one hundred and two cases of Professor Delafield's exhibited deafness during the second week of the disease, or only a small proportion of them, then I will have to admit that my experience has been too limited to furnish me any data from which to draw conclusions. Respectfully, E. D. Coonby, M.D.

Mariners' Harbor, Staten Island,
November 27, 1883.

A FEW WORDS ABOUT THE YELLOWSTONE NATIONAL PARK.

To the Editor of The Medical Record.

Dear Sir: The Yellowstone National Park is wonderland—nothing more, and very surely nothing less. All who have been privileged to visit it will admit this cardinal fact of its existence. But it is not the kind of wonderland for fairies fit to dwell in, unless, indeed, those beings had first learned to survive a twofold ordeal, consisting in alternate congelation by nocturnal cold that would do credit to the North Pole, and diurnal evaporation through heat that the Equator might feel proud of.

As for your ordinary specimen of frail humanity, it

seldom persists in feeling serenely comfortable while experiencing the intense climatic variations that this park affords. In fact, a common mortal might there be apt to suddenly lay an overweening stress on his common mortality. He might, for instance, more or less silently melt away, or freeze solid, or at any rate perish after some fashion more deserving of professional consideration. But, all the same, it is a glorious wonderland, is this great park. The chief wonder, however, is this, that in spite of the perpetual influx of conscientious visitors, the wonders are still there.

So, too, is most of the land. The missing portions have been carried away by the enterprising geologist—a strange disease that erupts sporadically in this region. But let us be consoled. The Government has already appointed a scientific commission to fully investigate that dreadful plague. And when the Government appoints a commission—but let that pass.

The typical Yellowstone wonder is a rather shy institution. You can win it, however, by judicious and persistent wooing; and when at length you have succeeded in your endeavors, you find that you have secured a much bigger wonder than you bargained for—an intermittent geyser, for instance, that throws, playfully, high up into the air several lakes a minute, either clear lakes or muddy ones. It makes an ipecac-prescribing man feel almost small by comparison to witness such powerful results. Nature is, after all, a great physician—a model instructor. Only to think of the immense *vis emeticatrix naturæ*, here so plainly visible!

Or if you fail to capture a spouting geyser, very likely you will find some mammoth hot springs, steaming, gurgling, bubbling, boiling, with sulphurous water trickling down over the sides of great natural basins. Or if neither geyser nor hot spring, a grotesque formation, that plainly tells of exhausted spout or primal volcanic outburst. Indeed, almost at every step you are thus confronted with the remnants of former elemental chaos, or the intact relics of past upheavals. There is but one drawback to a comfortable revelling in these and many other unrivalled sights. The wonders, as already intimated, are not easily accessible. However, this may soon be changed. Time, occasionally stimulated by congressional appropriations, will do wonders with this wonderland.

But in all earnestness some means might be devised to develop, protect, and make easier of access the great natural beauties and resources of this extraordinary region. For example, there may reside in its countless hot springs and sparkling wells medicinal virtues of high value, that might prove beneficial or curative in many obstinate diseases. But as yet we possess absolutely no trustworthy information concerning them. A beginning in the right direction has, however, now been made. Professor Hoffmann, of Berlin, the well-known chemist, has secured samples of many of these springs and waters, so that we may soon expect to have made public the results of reliable analyses.

The Mammoth Hot Springs Hotel, prettily located at the entrance to the park, must be classed with the daring enterprises of American pluck. It resembles the huge caravansaries, so called, of Saratoga, Long Branch, or Coney Island. The bill of fare is quite elaborate, the rooms are large and good, the service is satisfactory. One weak, or rather strong point, your correspondent detected in the shape of an everlasting India-rubber cow. This extraordinary animal, being properly sliced and broiled, was served by dignified and solemn waiters as game. They called it elk-steak or mountain sheep fillet. But the guests only wrestled with it, they could not chew it. It was an exasperating Yellowstone wonder.

From this great hotel as a starting-point you can travel on horseback or in vehicle through the park for days and days, in pursuit of various wonders. The writer was fortunate. He procured a pony slightly handicapped with a somewhat Mexican saddle. He immediately bounded off with unbounded enthusiasm, apparently shared by the steed, a noble animal, that galloped up and down the steepest hills as though winged with speed. Presently he was all aglow with the inspiring conviction that such powerful equestrianism had been rarely equalled, and certainly never excelled. It must have been a latent talent hitherto submerged in excessive medical erudition. Now, when opportunity offered, it at once asserted itself. At any rate, here was a flattering and pleasant reflection, and it endured just ten miles. Then the proud certainty that, after all, it only depends upon the rider, weakened a little. The next five miles it weakened a good deal more. Then it weakened still more. And it must be confessed, for the last ten miles, logic, philosophy, and cold reason compelled the humiliating admission that, after all, it all depends upon the horse.

As for those who had selected wagons, they insisted that these vehicles were discovered from the very start to be but cunningly devised apparatus for the creation of blinding dust and promiscuous torture. The day was in all respects a memorable one, however.

We had left the Mammoth Hot Springs Hotel late in the morning, and reached our first day's halting-place, a singularly impressive spot, early in the afternoon. It was but ten minutes' walk from the Norris Geyser Basin, which your correspondent will not attempt to describe. Mr. Winser's guide-book does ample justice to its many wonderful and striking features. In fact, the writer wishes to here express his indebtedness to the two guide-books of that author, for much suggestive and valuable information concerning the entire region traversed during this trip. The spot just mentioned, where tents had been pitched for our accommodation, was situated on a gentle slope wooded with fir and pine trees. Below was a placid valley, cut by a clear stream winding its rapid course plashingly along, eager for union with the Yellowstone River. Around all an odd frame-work of distant snow-clad mountains completed an attractive picture, here barely outlined.

Gradually, under the soothing influence of a hearty meal and sufficient rest, the depressing effects of our long ride began to wear off. The sun was scarcely set, and already round about us the shadows quickly deepened into encircling darkness. Now a huge fire was kindled, fed by crackling boughs and fallen pine-trees. Its flickering glare strangely illuminated a wide circuit. In fitful gusts the air blew chilly through the camp, forcing the flames heavenward in sudden angry leaps. An expectancy of snow was in the atmosphere.

The company were soon attracted to the fire, disposing themselves in various groups around this centre of grateful warmth. Perhaps most of them were quite unconscious of the remarkable and highly picturesque effect thus produced. There they stood, sat, or lounged in various attitudes of contemplative repose. Members of the British Parliament were there, ambassadors, several ladies, distinguished Germans, authors, statesmen, the inevitable American colonel, and others, representing foreign or native intelligence, wealth, and refinement. Never before in the history of that region was such an assembly seen gathered about a blazing camp-fire. Beyond them, and to one side of the fire, in striking contrast with these gentler folk, the drivers had assembled. The brightness of the flames lit up the weather-beaten, sun-tanned faces of these gaunt, strangely clothed men. They smoked and chatted in grim contentment, looking for all the world like gypsy brigands on a frolic. Their forms seemed sharply etched against the blackness of the woods. A tethered pony now and then timidly approached, to swiftly scamper off again in fright at some sudden noise or motion. In the far distance the jagged outline of the sombre, passionless mountains came and went, with the fitful rise and fall of the lurid flames. And above us was spread a starlit sky, with a faintly shimmering moon to mitigate its seeming coldness. Really the sight of all this was like a poem, unwritten but yet felt.

Presently some mollified German thawed out in song. His example proved contagious. Soon he was joined by a full-voiced chorus, and the night-air rang with sweet melody. They sang long and well, those foreigners in a strange land. The enchanting strains of the old German *Volkslieid*, alternated with the Tyrolese *Jodler*, or the more modern students' song. At times a plaintive, melancholy music, and again bright, joyous, laughing notes resounded through hill and valley with faint and fading reverberations. Never until then was the delicious cadence of such tones heard amid those surroundings.

But at length they too must cease. We sought the inviting warmth of our blankets. Presently no sound was heard save the gentle sighing of the breeze in the tree-tops. The pines still rocked and swayed, agitated by fitful gusts of moaning wind. Now and then the dying embers of the camp-fire were fanned back to momentary life. A sudden flame leaped up spasmodically, to perish quickly in the darkness. Above, the stars still glittered, cold, keen, impassive. Shrouded in gloom the camp lay sleeping.

At early dawn there was a harsh awakening to rude toilet and shivering breakfast. The actual experiences of the night before blended imperceptibly with the vivid dreams that had followed. A shadowy memory of pleasant bygones was alone recalled by the heap of ashes that lay before us. The journey proceeded, and many strange, weird sights were seen. But it will not be possible to do justice to all we witnessed. Enough has been said to show that the Yellowstone Park deserves a visit, and will amply repay the tourist's outlay of time and money. The imperfections and discomforts inseparable from new regions will soon be measurably relieved. In time it must become a popular resort for foreign as well as native travellers. And now these random notes have finally ended, and the reader may feel relieved. Very truly yours,

EDMUND C. WENDT, M.D.

136 WEST THIRTY-FOURTH STREET, NEW YORK,
November 10, 1883.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from November 24 to December 1, 1883.

WOLVERTON, WILLIAM D., Major and Surgeon. Assigned to duty as Post Surgeon at Washington Barracks, D. C. S. O. 222, par. 7, Department of the East, November 27, 1883.

BROWN, PAUL R., Captain and Assistant-Surgeon. Assigned to duty in the Department of Arizona. S. O. 273, par. 4, A. G. O., November 28, 1883.

MERRILL, JAMES C., Captain and Assistant-Surgeon. Relieved from duty in the Department of the East, and assigned to duty at Columbus Barracks, Ohio. S. O. 270, par. 4, A. G. O., November 24, 1883.

BREWSTER, WILLIAM B., First Lieutenant and Assistant-Surgeon. Extension of leave of absence granted September 15, 1883, further extended two months. S. O. 271, par. 4, A. G. O., November 26, 1883.

MADDOX, THOMAS J. C., First Lieutenant and Assistant-Surgeon. Granted leave of absence for two months. S. O. 136, Department of the Missouri, November 24, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 1, 1883.

KINDLEBERGER, D., Medical Inspector. To be relieved from duty on the Retiring Board, on December 9, 1883.

CHILD-BEARING LATE IN LIFE.—Dr. John Meredith, reports (*British Med. Jour.*) the case of a woman who gave birth to a child when forty-eight years of age.

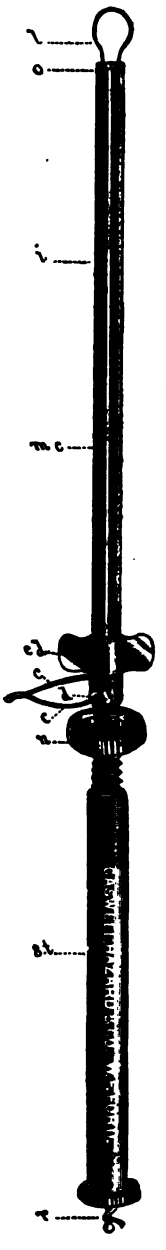
New Instruments.

A NEW GALVANO-CAUTERY ÉCRASEUR.

BY WILLIAM C. JARVIS, M.D.,

NEW YORK.

THE possibility of utilizing the mechanism of my cold-wire snare-écraseur[1] for operating with the incandescent electric loop, has occupied my attention for many months. The experiments undertaken to accomplish this object have recently resulted in the construction of an instrument differing but little in shape and mechanism from the original écraseur. An examination of the accompanying illustration will facilitate a clear comprehension of the alterations. A tube has been attached to the main canula, *m c*, of the cold-wire écraseur. This additional canula only extends to the cross-bar, *c d*, the main tube alone being continuous with the handle. The tubes are properly insulated at *i*. Each tube is provided with binding screws, *d*, the binding met on the small tube also serving to jam and retain one extremity of the wire. The wire also passes through the main tube, *m c*, and is wound around the retention pin, *r*, on the slide tube, *s t*. Inasmuch as the end of the wire in the small tube remains fixed, it will be observed that the size of the loop can only be changed by sliding the tube, *s t*, to which the movable extremity of the wire is attached. The relative position of the binding screws, *d*, to the cross-bar, *c d*, is intended to prevent any interference of the connecting battery wires, *c c*, with the manipulation of the instrument. An objectionable feature of double canulæ, that of permitting the growth to become constricted against its orifices, with consequent laceration of the last shred of tissue instead of its complete division by the wire loop, may be remedied by means of a peculiarly shaped slot cut into the orifice and inner side of each tube. By connecting both canulæ properly insulated with the orifice of the handle, the loop can be tightened as in the cold-wire écraseur.



With the assistance of my friend Dr. M. J. Roberts, I subjected the instrument to a careful test, which proved perfectly satisfactory. Masses of meat, equal in size to the largest growths, were divided with ease and completeness.

I consider the instrument particularly useful for removing the peculiar form of enlarged tonsil described by me in an article on "Tonsillotomy without Hemorrhage." Rapid excision of these tonsillar growths is invariably followed by profuse hemorrhage. The protracted strain caused by the cold wire, when used to evert this issue, drawing open the soft peri-tonsillar structures, sometimes constitutes an objection to be overcome by the employment of an incandescent electric loop. Dr. Henry Schweig informs me that, in his opinion, the heated wire will more certainly sink into the substance of supra-pharyngeal adenomata, and their complete removal will be greatly facilitated by the procedure. The instrument was constructed by Mr. W. F. Ford, with Caswell, Hazard & Co., whose well-

[1] New York MEDICAL RECORD, April 30, 1881, etc.

known courtesy and skill I am always anxious to recognize.

For obvious reasons the soft galvano-caustic loop, generally speaking, must always prove inferior in usefulness to the elastic ring of tempered steel wire.[1]

25 East Thirty-first Street.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 4, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 27, 1883.....	0	33	64	2	36	37	0	0
December 4, 1883.....	0	32	44	1	51	39	1	0
Deaths.								
November 27, 1883.....	0	12	7	2	4	16	0	0
December 4, 1883.....	0	13	9	1	6	22	0	0

The Toxic Effects of Nitrite of Sodium.—It appears from several letters published by Drs. Murrell, Ringer, and Law that nitrite of sodium is dangerous in doses of twenty grains, as at first recommended. It should not be given in doses greater than two grains at first, increased to five grains if necessary.

A Baked Bean Causes Death.—Baked beans will hereafter be regarded with suspicion. This succulent and nutritive edible, for ages so popular in New England, has caused the death of a man at Lynn named Wallace Cobb. He died recently, and it was supposed that death was caused by an accident, but a post-mortem examination reveals the cause to be a hard-baked bean, which lodged in the appendix vermiformis, situated in the right iliac fossa, on the lower right-hand corner of the abdomen. Inflammation followed and finally caused death.

Peptonized Milk in Acute Dyspepsia.—Five grains of extractum pancreatis and twenty grains of bicarbonate of soda are dissolved in four ounces of tepid water. This is added to one pint of fresh milk warmed to the temperature of the body, and the mixture is allowed to digest for about one hour at a temperature of 100° F. The milk, when ready, should have a slightly bitter taste, or rather after-taste. It is now raised to the boiling point, strained, and placed on ice ready for use.

Mercurial Soap.—Vomacka gives the following directions for the preparation of a substitute for blue ointment, which also keeps better: One part of soft and perfectly neutral potash soap is mixed with a little glycerine in a glass mortar, and one part of mercury is gradually added with constant trituration. When no globules of mercury are any longer visible, add two parts more of potash soap to make four parts. It may be scented with lavender or other essential oil.

The Study of Biology.—At the recent meeting of the Biological Section of the British Association, Professor Lankester advocated increased provision for the advancement of the science of biology. In this respect England was far below France and Germany, and even Holland, Belgium, Italy, and Russia. There were not wanting people who were anxious to restrain rather than aid the spread of scientific knowledge. But no one could trace the limits of science nor the possibilities of happiness, both of mind and body, which it might in the future bring to mankind. As day by day the old-fashioned stimulus to the higher life loses the dread control which it once exercised over the thoughts of men, the pursuit of wealth, and the indulgence in fruitless gratifications of sense, become to an increasing number the chief concerns of their mental life. Such occupations fail to satisfy the deep desires of humanity, they become wearisome and meaningless, so that we hear men questioning whether life be worth living. When the dreams and aspirations of the youthful world have lost their old significance and their strong power to raise men's lives, it will be well for the community which has organized in time a following of, and a reverence for, an ideal good which may serve to lift the national mind above the level of sensuality and to insure a belief in the hopefulness and worth of life. The faith in science can fill this place; the progress of science is an ideal good—sufficient to exert this great influence.

Memory.—A man's memory is like his stomach. To do its best work it must have good treatment. It must neither be neglected nor overloaded. It can easily be so abused by neglect, or by irregular and unsystematic employment, as to become chiefly a cause of annoyance and discomfort; or, again, it can be so overworked and heavily taxed that it becomes practically the chief organ or agent of the entire system, every other portion dwindling in its comparison. The latter course is the great danger of those who value the help of a tenacious memory. Both memory and stomach are valuable, not in proportion to the burdens they can carry, but in proportion to their training for their part in the work of the system as a whole; and either of them is made effective as much by what is kept from it, as by what is packed into it.

Dr. Brown-Séquard on Analgesia by a Proposed New Method.—Dr. Brown-Séquard has written the following very interesting letter to the *Lancet*: "Sir—My pupils, not I, have proposed to employ on our species the method I have discovered of producing analgesia in monkeys, dogs, and other animals. I am not prepared to make such a proposal; not that there is any danger in the method, nor that the degree of analgesia is insufficient, but because I have not yet succeeded in devising for clinical use an easy means of applying carbonic acid or chloroform vapor to the mucous membrane of the larynx, without allowing these substances to go into the lungs. This last point is of absolute necessity, as when these substances enter the blood they can no longer produce, by irritation of the mucous lining of the larynx, their wonderful effects. My experiments, some already published, others quite new, show that an irritation of the laryngeal mucous membrane (and also, but in a much slighter degree, of the lining of the upper part of the trachea) can, through the superior laryngeal nerves, or even through one of them only (but then the analgesic effect is chiefly unilateral), act on the nervous centres in such a way as to produce a more or less complete inhibition of either the power of perceiving impressions able to give rise to pain, or of the power of transmitting those impressions. Every kind of irritation (mechanical, thermic, chemical, or galvanic) of the terminal ramifications of the superior laryngeal nerves can produce that effect; but none in the same degree and with so great a persistence (in monkeys sometimes the analgesia lasts more than twenty-four hours) as the excitation due to carbonic acid or chloroform vapor, the first especially. The power of the parts I have named in producing an inhibition of the kind of sensibility relating to pain, without disturbing any other power or function of the nervous centres, is so great that sometimes a partial section of the larynx or trachea produces a temporary and almost universal, but incomplete analgesia."

Therapeutics of the Nails.—*Incurvatio Unguium.*—When the nail threatens to grow into the skin, or has already injured it, the first indication is to put on a sock

[1] New York Medical Record, May 27, 1882.

of moderate size and to remain quiet. Afterward the nail is to be scraped on the affected side till it is sufficiently thin; then it is to be seized with a delicate forceps, raising it in a sense inversely to its natural curvature. This having been done, a small lamina of lead of a few millimetres thickness is to be inserted beneath the nail, and after folding it over the toe it is to be fastened there with a strip of plaster. In this manner the granulations being no longer in contact with the margin of the nail, the pain ceases and the sore heals more or less rapidly; during the whole of which time the apparatus should be frequently inspected, so that the lamina of lead may not become displaced. Besides this, it is necessary to scrape the nail every two or three days so as to keep it thin and flexible, until the skin returns to its natural state and can resist the pressure of the nail, and then the lead is removed. Hebra treats ingrowing nail in the following manner: Cut some flakes of lint of the length of the lateral groove of the nail or a little longer. The lint is to be placed on the nail parallel to its groove; then with a flat probe introduce the lint, thread by thread, between the flesh and nail. Thus the parts are separated with the little cushion of lint lying between. The sulcus is then to be filled with pledgets of lint, and finally, long narrow strips of adhesive plaster are to be applied, always from above the inflamed sulcus downward, in such a manner that the latter is still further removed from the margin of the nail. With such a dressing applied with sufficient care, there is no pain whatever; and the patient can in a short time put on his ordinary stocking and walk without trouble. After twenty-four hours the strips of adhesive plaster are to be removed, being previously softened in a bath of tepid water. This dressing is to be repeated daily, and in from two to four weeks it will be found that the toe is entirely well. In those cases in which it is found that the nail is not abnormally implanted, and that it is the soft tissue only that grows in a vicious manner, I believe it will be well to remove the ulcerated tissues. This little operation, which may be performed without anæsthesia, deserves to be described. A double-edged bistoury held as a pen, is to be passed through the diseased tissues, taking care to graze the lateral margin of the nail where the disease exists. The tissues are then to be removed in such a manner as to expose the side of the nail which lies buried in the pulp. The wound should be washed with a solution of carbolic acid, and some lint placed on it like a cushion, which is firmly secured by a bandage, with some compression.—*Jour. of Cutaneous and Venereal Diseases.*

Two Pounds of Tapeworms.—M. Paul Agniel reports, in the *Semaine Médicale*, the case of a man, twenty-four years of age, who had never been ill, and whose appetite had always been good, who at intervals of a week had noticed the expulsion of segments of tapeworm. After preparation, an infusion of eighty grammes of pomegranate-rind was administered, followed by castor-oil. This brought away an enormous mass of tapeworm, which was found upon examination to consist of eleven worms, with their heads as shown by the hooplets. The mass weighed one kilogram, and the combined length of the different worms amounted to 34.50 mètres.

Medical Notions among the Chinese.—Dr. C. H. Daniells, of Swatow, China, sends us the following interesting item: "Medical literature among the Chinese is abundant, 'of making many books there is no end,' but the correctness of ideas relating to medicine may be judged by reference to any of them. A book entitled 'Poems Relating to the Nature of Medicine,' affords a good degree of interest, although it contains no poetry—the title is given in order to please the Chinese ear. It treats of anatomy, physiology, and therapeutics, the thoroughness of which may be judged by the fact that it contains but one hundred and twenty pages. It fully elaborates the Chinese idea of the male and female principle in nature, claiming for the heaven's male principle heat and warmth, for its female principle cold, while the earth's male principle is the agreeable and insipid, its female principle is the bitter, the sour, and the salt. Extending this idea to anatomy it makes every part of the human system to belong either to the male or female principle. It also presents the underlying principle of all Chinese medical practice, the classification of all diseases and remedies as hot and cold, with the theory for treatment. 'Hot remedies for cold diseases and *vice versa*.' Its anatomy divides the cavity of the human subject into three *apartments*, the upper contains the heart and lungs, the middle the liver and spleen, the lower the kidneys and the generative organs. It describes three pulses at each wrist, the lower pulse of both being the index to the upper apartment of the cavity, the middle to the middle apartment, and the upper pulse to the lower apartment. Thus the lower pulse of the right hand indicates the condition of the heart, that of the left hand the condition of the lungs, the middle pulse of the right hand indicates the condition of the liver, that of the left the spleen, etc. The human body is composed of gold, wood, fire, earth, and water. During the spring the wood predominates, and the liver being strong at that time, the pulse of the liver becomes the strong pulse of the body; during the summer the fire predominates and the heart pulse is the strong pulse; during the fall the gold predominates and the lung pulse is the strong pulse, while during the winter the water predominates and the kidney pulse is the strong one. The left hand belongs to the male principle, hence a man's left pulse is stronger than his right; the right hand belongs to the female principle, hence a woman's stronger pulse is in the right hand. The therapeutics of the book show considerable system in arrangement, the animal, vegetable, and mineral kingdoms being taken in order. A few extracts will give the estimate of their correctness. 'The bones of the tiger are of a mild nature, have an acrid taste, and are not poisonous. They drive poisons from the system, cure colds, numbness, and all discharging ulcers.' 'The flesh of a *black* rooster strengthens the bowels, the tendons control deafness, the intestines cure incontinence of urine, and the blood of the comb increases the milk of nursing women.' 'Peppermint relieves all forms of congestion and astringents cure diarrhœa.' The Chinese make use of herbs as domestic remedies. The people prize their own system of medicine, which ought to be popular—at least with their undertakers."

Prolonging the Existence of the Pocket Thermometer.—Dr. C. H. Eames, of East Saginaw, Mich., says: "A number of expedients have been proposed for prolonging the life of the pocket thermometer. May I add one? Have a pocket made to fit the thermometer."

Dislocation of the Ankle Forward and Outward.—Dr. H. S. Thorne, of Farmingdale, L. I., sends the history illustrating the above rare condition: "On July 20, 1883, the Rev. Mr. Y——, aged sixty, height 6 feet 2 inches, weight 200 pounds, while in the loft of his stable attempted to descend on a stationary step-ladder to the floor below. He lost his footing and fell a distance of eight feet, striking first the lower step of the ladder with his left heel, dislocating the ankle *forward*, and then, after the rebound, struck the floor with the outer side of the foot, throwing the ankle violently outward. When first seen the foot was in a position nearly at right angles to its true one. The internal malleolus was at the inner border of the plantar surface of the foot and strongly pressing against the scaphoid bone, the outer malleolus formed a prominent bony tumor at the outer side of the heel, and the articular surface of the astragalus was two inches in front of the outer malleolus and pushing the skin of that part of the dorsum of the foot on which it impinged out to such an extent as to be on the point of penetrating it, having forced its way through the ligaments, fascia, and tendons until

nothing but the skin itself stood in the way of the injury being a compound luxation. There was no fracture of either malleolus. Two hours after the injury the patient was etherized. Owing to the peculiar deformity it was not deemed advisable to follow the usual method of reduction, *i.e.*, to flex the leg and then extend. The leg was kept extended and held firmly by an assistant while the heel was grasped by the right, and the dorsum of the foot by the left hand, and forcible extension and manipulation were made. The foot was twisted in such a manner as would compel the astragalus to retrace the path it had made in getting into its abnormal position through the soft parts. In this manner the reduction was perfectly effected without very great difficulty. A roller was firmly applied and side splints put on. Hot applications were freely used and hot-water baths every day. The foot was rubbed and kneaded to prevent solidification of effused material, and the limb was elevated. On the twenty-second day the patient was able to use crutches; on the thirty-sixth he walked with a cane, and now, ten weeks after the injury, he goes without the cane, does not limp, and there is no swelling or stiffness of the joint."

The Therapeutic Value of Bicycling.—Dr. Geo. S. Hull says in the *Medical Times and Gazette*: "Concerning the therapeutics of the bicycle, it is not making too broad a statement to say that it can be recommended in nearly all cases where horseback riding is indicated, the exceptions being ladies and very old or crippled men, and for most of these the tricycle is still preferable to the horse, and certainly infinitely safer. In horseback-riding the inexperienced writer gets the most exercise (jolting, which is not always beneficial), while the skilful horseman merely gets the pure air, and very little above the usual amount of that, as his circulation and respiration are not much increased by the easy, quiet motion his *skill* as a horseman gives him. In fact, after learning to ride horseback, it often becomes tiresome, the exhilarating effect passes off, and the good results consequently diminish. In bicycling, however, the whole body is in motion, and every rider gets a like amount of exercise. The circulation is quickened to any extent; the blood-vessels of the limbs are not compressed to the extent they are in horseback-riding; there is but little or no jarring; the muscles of the trunk and upper extremities (which, as a rule, are so imperfectly developed in physicians), are brought more into play, and the mind kept actively engaged in the sport—for sport it becomes, even when flying along to a 'terrible accident,' or to a death-bed scene."

On Bandaging the Infant.—In his retiring address Captain Douglas Galton, President of the British Sanitary Institute, delivered a philippic against the baby-bandage. He condemned what he described as "those mischievous two yards of calico," which, wound round the middle of so many infants on their introduction into the world, as a sort of baptism to the numerous evils of fashion in dress to which they were admitted, constricted and hindered the expansion of that very region of the body where heart and lungs, stomach and liver, organs of no mean importance, were struggling for room to grow and do their work, and where natural mechanical conditions threw some difficulty in the way of full development. The expansion of the lower part of the chest, which was so pronounced a feature in the well-formed human figure, was attained chiefly in higher animals, and like most of such higher prerogatives, was the result of more than ordinary effort, and was, proportionately, liable to suffer from interference. The chief effort to accomplish it was made soon after birth, when breathing, and food-taking, and the various changes incidental upon them began; and at this very juncture the opportunity was taken by meddlesome hands to hinder the expansion of the region where these new processes, upon which the well-being of the whole fabric depended, had to be initiated and carried out. A more pernicious device could scarcely be conceived than this relic of antiquated nursedom; and it was impossible to estimate the number of deformed or pigeon chests, of hampered stomachs, livers, lungs, and hearts, with their varied attendant life-enduring infirmities and curtailment of life, that must result from the use of these "swathers," as they were called, for which there was not the slightest necessity. The oft-condemned tight waistbanding and lacing of after years, which affected only the small fashionable section of one-half of the community, was not, even in those who were subjected to it, so mischievous as this concealed semi-strangling process which was diligently carried out in the case of a large proportion of infants of all classes. Of the three demands of the infantile period—liberty of movement, fresh air, and good food—it seemed strange that the first two should be limited by smothering bed-clothes, swathers, long petticoats, and other devices, together with imperfect ventilation of rooms, while the last was liable to be supplied sometimes in sufficient quantity and bad quality, but often, whether good or bad, in superabundance.

The Prevention of Horse Accidents.—Mr. C. C. Baird, of the Dick Veterinary College, Edinburgh, has invented an india-rubber frog-pad for fitting into the heels of the shoes of horses, with the view of preventing the animals from slipping and falling on the causeway. The invention is exceedingly simple, and will be of great value to medical men and others who drive horses, especially on asphalt and in frosty weather. The pad can be removed in the evening and replaced in the morning. A set of pads, it may be added, is expected to wear out two sets of shoes. The trial of the invention, we believe, has fully borne out the statements of the inventor as to the merits of the apparatus.—*Medical Press.*

A leather pad, considered superior to the rubber article, is coming into use in Louisville.—*Louisville Medical News.*

A Liniment for Rheumatism.—The *Therapeutic Review* says: "Methyl salicylate (oil of wintergreen) mixed with an equal quantity of olive-oil or linimentum saponis, applied externally to inflamed joints affected by acute rheumatism, affords instant relief, and, having a pleasant odor, its use is very agreeable."

The Real Missing Link.—Dr. Struthers, at a meeting of the British Association, said he had once in Aberdeen had to examine the case of a body reported to have a tail, but he found that it was simply a case of misdirection of the natural bones, and so the tail case broke down. The anthropologists were often jokingly asked when they were going to find a man with a tail. It should be remembered that even the higher apes had no tail, and therefore the question of tail or no tail was of no importance. To discuss the missing link was to tread on dangerous ground. Hair would never settle the question. The great point was the brain. The missing link was not a link, but a chain. The brain was one link, and the other was erect posture. If we could conceive a monkey having somehow got one day an abnormally superior brain, it would not remain up a tree. Then his limbs would commence to adapt themselves to their new conditions. Given the larger brain and the larger intelligence, the other development would follow in the course of time. The missing link, in one of the most painful senses, could be seen any day in the idiot ward of an asylum.

Coca-plug.—A combination of coca and tobacco is being quite extensively advertised in the St. Louis papers. Certificates from six prominent St. Louis physicians to the effect that tobacco and coca would be less injurious to the system than tobacco alone form a part of the advertisement.—*Medical World.*

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 24 NEW YORK, DECEMBER 15, 1883 Whole No. 684

Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

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(Continued from p. 630.)

Nature.—The theory that cerebro-spinal fever is a local disease, occurring epidemically, was commonly held in the first part of this century, a theory which is now discarded. Job Wilson, in 1815, considered it a form of influenza, and he could see no utility in drawing a distinction between spotted fever and influenza. We, at the present time, can see no resemblance between the two, except that both occur as epidemics. The theory that cerebro-spinal fever is a peculiar local disease occurring in epidemics is more plausible than that it is a form of influenza. Even Niemeyer says that it presents no symptoms except such as are referable to the local affection. But the evidence is strong that cerebro-spinal fever is a constitutional malady, with the meningitis as a local manifestation, just like measles with its bronchitis, or scarlet fever with its pharyngitis. The abrupt and severe commencement, unlike that of those forms of meningitis, which are known to be strictly local, and the early blood change, as shown in certain cases by the appearance of the skin, and extravasations under it, indicate a general disease. Constitutional diseases having prominent local symptoms and lesions are apt to be regarded at first as local. It is only as time goes on, and they are more thoroughly studied and understood, and clinical observations multiply, that their constitutional nature is recognized, as for example at this late day the profession are beginning to recognize the constitutional nature of certain cases of croupous pneumonitis.

The theory that cerebro-spinal fever is a form of typhus once had advocates, but it is now so generally discarded, as untenable and absurd, that it would be a waste of time to consider the facts which differentiate the two maladies. Cerebro-spinal fever should, therefore, be considered as distinct from all other diseases, a malady *sui generis*, and in nosological writings it should be classified with those constitutional maladies which have specific causes.

Although this disease ordinarily occurs in an epidemic form, in localities widely separated from each other, and after continuing a few weeks or months, totally disappears, perhaps never to return, or not till after the lapse of years, nevertheless in certain localities it becomes established, so that it is proper to describe it as an endemic, a fact to which we have already alluded as regards New York City. I do not know that it is endemic in any village or rural locality in this country, but it appears to be permanently established in certain of the large cities. The large cities, with their promiscuous population, foreigners and natives, their crowded tenement-houses, and many sources of insalubrity, furnish in an eminent degree the conditions which are favorable for the development and perpetuation of the specific principle. Those diseases which in the present state of our knowledge we have reason to believe are caused by micro-organisms, we would expect to prevail most where domiciles are crowded and filthy, and systems are enervated by impure air, poor diet, hardships and privation. Hence in New York City, in the quarters of the poor, there is a constant succession of the infectious diseases of childhood. Often two or more of them occur simultaneously, and it is difficult to eradicate them or limit their extension when once they have obtained a foothold. The fact that a large city, with its tenement-house population, affords in an eminent degree the conditions in which the infectious diseases are developed and propagated, when once their specific principles have been introduced, is one of the chief causes of the large percentage of deaths among the city children. In New York what has been gained in saving life by the suppression of small-pox has been more than counterbalanced by the mortality produced by diphtheria and cerebro-spinal fever, both now to all appearance permanently established in our midst. The following table gives the number of deaths annually from cerebro-spinal fever in this city since the close of 1871:

	Number of deaths.		Number of deaths.
1872	782	1878	97
1873	290	1879	108
1874	158	1880	170
1875	146	1881	461
1876	127	1882	238
1877	116		

It is seen that the greatest mortality was in the first year after the introduction of the disease into the city, after which the number of deaths gradually diminished, year by year, till 1878, when the lowest mortality was reached. Since 1878 the mortality gradually increased till 1881, in which year the number of deaths was double that of any other year except 1872, it being half that of 1872. The weather and the season appear to exert little influence on the prevalence of this disease now that it is established in the city. From the commencement of 1882 till the end of May of the current year I find that it caused deaths in every week except one, and about the same number in each of the seventeen months embraced in this period.

The mortuary reports of Philadelphia likewise show that cerebro-spinal fever has remained in that city since its introduction in 1863, a period of twenty years, the annual deaths produced by it varying between 36, the minimum, in 1869 and 1870, and 384, the maximum, in 1864. In Providence, also, as appears from Dr. Snow's reports, cerebro-spinal fever has caused annually more or fewer deaths since 1871. Therefore, we repeat, this fact may be added to the sum of our knowledge of this disease, that once gaining a lodgment, where the conditions are favorable for it, as in a large city, it may become established and remain there an indefinite time.

Anatomical characters.—I have notes of the post-mortem appearances in 76 cases, published chiefly in British and American journals; 29 died within the first three days, 28 between the third and twenty-first days, and the duration of the remaining 11 was unknown. These records furnish the data for the following remarks:

The blood undergoes changes which are due in part to the inflammatory and in part to the constitutional and asthenic nature of the disease. The proportion of fibrin is increased in cases that are not speedily fatal, as it ordinarily is in idiopathic inflammations. Analyses of the blood by Ames, Tourdes, and Maillot show a variable proportion of fibrin from 3.40 to more than six parts in

1,000. In sthenic cases accompanied by a pretty general meningitis, cerebral and spinal, there is, after the fever has continued some days, the maximium amount of fibrin, while in the asthenic and suddenly fatal cases, with inflammation slight, or in its commencement, the fibrin is but little increased. The most common abnormal appearance of the blood observed at autopsies is a dark color with unusual fluidity and the presence of dark soft clots. Exceptionally bubbles of gas have been observed in the large vessels, and the cavities of the heart. An unusually dark color of the blood, small and soft dark clots, and the presence of gas-bubbles, when only a few hours have elapsed after death, indicate a malignant form of the disease, in which the blood is early and profoundly altered. In certain cases this fluid is not so changed as to attract attention from its appearance. The points or patches of extravasated blood which are observed in and under the skin during life in some patients usually remain in the cadaver. When an incision is made through them the blood is seen to have been extravasated not only in the layers of the skin, but also in the subcutaneous connective tissue. Extravasations of small extent are also sometimes observed upon and in the thoracic and abdominal organs.

In those who die after a sickness of a few hours or days, namely, in the stage of acute inflammatory congestion, the cranial sinuses are found engorged with blood, and containing soft dark clots. The meninges enveloping the brain are also intensely hyperæmic, in their entire extent in most cadavers; but in some cases the hyperæmia is limited to a portion of the meninges, while other portions appear nearly normal. In those cases which end fatally within a few hours, this hyperæmia is ordinarily the only lesion of the meninges; but if the case be more protracted, serum and fibrin are soon exuded from the vessels into the meshes of the pia mater, and underneath this membrane, over the surface of the brain. Pus-cells also occur mixed with the fibrin, sometimes so few as to be discovered only with the microscope, but in other cases in such quantity as to be much in excess of the fibrin, and be readily detected by the naked eye. Pus, which in these cases probably consists of white blood-corpuscles which have escaped with the fibrin from the meningeal vessels, sometimes appears early in the attack. Thus in the *Dublin Quarterly Journal*, 1866, Dr. Gordon relates the history of a case in which death occurred after a sickness of five hours, and a purulent greenish exudation had already occurred in places under the meninges. The exudation of fibrin also begins early. In a case of thirty hours' duration, published by Dr. William Frothingham in the *American Medical Times*, April 30, 1864, and in another of one day's duration, published by Dr. Haverty, in the *Dublin Quarterly Journal* for 1867, exudation of fibrin had already occurred in and under the pia mater. The arachnoid soon loses its transparency and polish, and presents a cloudy appearance over a greater or less extent of its surface. This cloudiness is usually greatest along the course of the vessels in the sulci and depressions, and where the fibrinous exudation is greatest, but it occurs also where no such exudation is apparent to the naked eye. Dr. Gordon describes a case of only eight hours' duration, in which the arachnoid was already opaque at the vertex, but of normal appearance at the base of the brain (*Dublin Quarterly Journal*, 1866), though the vessels of the pia mater were everywhere greatly congested.

The exudation—serous, fibrinous, and purulent—occurs as in other forms of meningitis, within the meshes of the pia mater, and underneath this membrane over the surface of the brain. The fibrin is raised from the surface of the brain with the meninges. It is most abundant in the inter-gyral spaces, around the course of the vessels, over and around the optic commissure, the pons Varolii the cerebellum, medulla oblongata, and along the Sylvian fissures. It is most abundant in the depressions, where it sometimes has the thickness of $\frac{1}{10}$ to $\frac{1}{4}$ of an inch, but it often extends over the convolutions so as to conceal them from view.

Most other forms of meningitis have a local cause, and are therefore limited to a small extent of the meninges, as, for example, meningitis from tubercles or caries of the petrous portion of the temporal bone, in both of which it is commonly limited to the base of the brain; or from accidents, when the meningitis commonly occurs upon the side or summit of the brain. The meningitis of cerebro-spinal fever, on the other hand, having a general or constitutional cause, occurs with nearly equal frequency upon all parts of the meningeal surface, except that it is perhaps most severe in the depressions, where the vascular supply is greatest. In cases of great severity the inflammatory exudation, fibrinous or purulent, or both, may cover nearly or quite the entire surface of the brain. Thus in the case of a negro, thirty-five years old, only four days sick, whose body was examined in Bellevue Hospital on May 30, 1872, the record states that there was a purulent exudation over the entire surface of the cerebrum and cerebellum. The quantity of serous exudation varies according to the duration of the disease and amount of congestion. In some the quantity is so small as scarcely to attract attention, but in other instances, especially when the disease is protracted, it is large. In a case reported by Dr. Moorman, in the *American Journal of the Medical Sciences*, for October, 1866, it is stated that about three pints of turbid serum escaped from the cranial cavity in attempting to remove the brain; but as there was no measurement the statement may be somewhat exaggerated.

In those who die at an early stage of the attack, the vessels of the brain, like those of the meninges, are hyperæmic, so that numerous "puncta vasculosa" appear upon its incised surface. At a later period this hyperæmia, like that of the meninges, may disappear. If there be much effusion of serum within the ventricles, and over the surface of the brain, the convolutions are apt to be flattened, and the pressure may be so great that the amount of blood circulating in the brain is reduced below the normal quantity. Thus in the case of a child of three years, who lived sixteen days, and was examined after death by Burdon-Sanderson, the ventricles contained a large amount of turbid serum, and the brain-substance was everywhere pale and anæmic.

Cerebral *ramollissement* occurs in certain cases. At one of the examinations in Charity Hospital, the patient having been only three days sick, the brain was found much softened. The dissection was made seven hours after death, so that the softening could not have been the result of decomposition. At one of the post-mortem examinations in Bellevue Hospital, softening of the fornix, corpus callosum, and septum lucidum was observed, and in another, softening in the neighborhood of the subarachnoid space. In a case related by Dr. Moorman in the *American Journal of the Medical Sciences*, for October, 1866, it is stated that portions of the brain, medulla oblongata, and pons Varolii were softened. In a case observed by Dr. Upham softening of the superior portion of the left cerebral hemisphere had occurred. Occasionally the whole brain is somewhat softened. Burdon-Sanderson, Russell, and Githens each relate such a case. Moreover, the walls of the lateral ventricles are ordinarily more or less softened in fatal cases of cerebro-spinal fever, as they are in the usual forms of meningitis. In rare instances the brain is œdematous, as in a case published by Dr. Hutchinson in the *American Journal of the Medical Sciences*, for July, 1866. In this case the patient was only four days sick, and the whole brain was œdematous, serum escaping from its incised surface.

The ventricles contain liquid, in some patients transparent serum, in others serum turbid, and containing flocculi of fibrin, or fibrin with pus. The liquids in the different ventricles, since they inter-communicate, are the same. The choroid plexus is either injected or it is infil-

trated with fibrin and pus. With the abatement of the inflammation absorption commences. The serum, from its nature, is readily absorbed, and the pus and fibrin more slowly by fatty degeneration and liquefaction. Occasionally the serum remains, and chronic hydrocephalus results. An infant who contracted the disease at the age of five months, and appeared to be convalescent, had, two months subsequently, great prominence of the anterior fontanelle, and other symptoms which indicated the presence of a considerable amount of effusion within the cranium. In another case, one year afterward, examination showed the enlargement of the head and prominence of the fontanelle which characterize chronic hydrocephalus. A boy of ten years, treated in Roosevelt Hospital in 1878, died three months after the commencement of cerebro-spinal fever. The records of the autopsy state: "Body a skeleton; brain, dura mater and pia mater appear normal, except a little thickening of latter at base of brain; ventricles much enlarged and full of clear serum; surface of walls of ventricles appears normal, but is soft; spinal cord and membranes apparently normal; heart, lungs, stomach, and intestines normal; liver congested; kidneys pale." In this case, therefore, all the other lesions of the cerebro-spinal axis, except the serous effusion, had nearly disappeared. No post-mortem examinations, so far as I am aware, have yet revealed the state of the brain and its meninges in those who have had this malady at some former time and have fully recovered, whether there may not be some traces of it which are permanent, as opacity or adhesions.

The remarks made in reference to the cerebral apply, for the most part, also, to the spinal meninges. There is at first intense hyperæmia of the membranes, usually over the entire surface of the cord, soon followed by fibrinous, purulent, and serous exudation in the meshes of the pia mater, and underneath this membrane. The exudation is sometimes confined to a portion of the meninges, more frequently that covering the posterior than anterior aspect of the cord, and when it is general it is ordinarily thicker posteriorly than anteriorly. In severe cases nearly or quite the entire spinal pia mater may be infiltrated by inflammatory products. Thus in case of an infant that died of cerebro-spinal fever at the age of ten weeks, in the service of Dr. H. D. Chapin, in the out-door department at Bellevue, the entire spinal cord was covered by a fibrino-purulent exudation, except a space about six lines in extent upon the anterior surface.

At the meeting of the New York Pathological Society, March 23, 1881, Dr. G. L. Peabody presented the specimens from the body of a patient, aged nineteen years, who died on the tenth day of cerebro-spinal fever. The exudation extended over the base of the brain, both lobes of the cerebellum, and covered completely the cord to the cauda equina, being, as usual, thickest upon the posterior surface. In some patients the spinal meningitis is severe, while the cerebral is slight, so that the symptoms referable to the spinal axis predominate, such as pain in the back and limbs, and opisthotonos. The exudation may have the usual appearance of fibrin and pus, but it is sometimes greenish and sometimes blood-stained. Small extravasations of blood also occur as a result of the hyperæmia, and in one case related by Burdon-Sanderson it is stated there was a layer of blood one-eighth of an inch thick over the whole cord below the bronchial swelling. In post-mortem examinations the central canal of the cord has usually been overlooked. Ziemssen relates a case, and Gordon another, in which it was dilated and filled with purulent fluid. The anatomical changes which have been observed in the cord itself have been injection of its vessels in recent cases, and occasional softening of portions. Thus in a case which was examined in Bellevue Hospital, April 13, 1872, it is stated that there was softening of the cord in the upper part of the dorsal region. In most of the examinations the only abnormal appearance detected in the cord was hyperæmia, but in a considerable proportion of cases the records state that the substance of the cord appeared normal.

Professor Wm. H. Welch, curator to Bellevue Hospital, has recently communicated to me the following results of his examinations:

"I have records of eight autopsies which I have made upon cases of cerebro-spinal meningitis, and in six cases I have examined, microscopically, portions of the hardened brain and cord. Post-mortem rigidity is usually well marked and continues for a long time after death. Upon removal of the skull-cap, which is often hyperæmic, the dura mater appears tense, and usually more or less congested. The sinuses contain loose, dark-red coagula, and some fluid blood. In one case I found a recently formed grayish-red ante-mortem thrombus in the left lateral sinus. The subdural space is usually free from inflammatory exudation, but occasionally a slight fibrino-purulent exudation is found on the outer surface of the arachnoid membrane. The pia mater is generally hyperæmic, and frequently it contains small ecchymoses. An exudation is present in the subarachnoid spaces, over both the convexity and the base of the brain, most abundantly, as a rule, at the base. Over the convexity the exudation appears in the form of greenish-yellow streaks along the veins between the gyri. At the base the exudation accumulates in the subarachnoid cisterns, such as those of the Sylvian fissure, of the optic chiasm, of the intercrural space, of the under surface of the cerebellum, and along the basilar artery. The cranial nerve-trunks may be enveloped in a purulent exudate as they emerge from the brain. The fluid in the ventricles may or may not be increased in amount, but is usually turbid from admixture of pus-cells. The choroid plexuses are often swollen and opaque.

"The substance of the brain is usually hyperæmic, and frequently contains punctate ecchymoses, which may occur in groups. Small foci of softening may be formed before death, but extensive diffuse softening, particularly that around dilated ventricles (hydrocephalic softening) is probably cadaveric, and due to imbibition of serum, although it may form within a short time after death.

"The inflammatory exudation occupies likewise the subarachnoid space over the cord. The exudation may surround the posterior nerve-roots for a distance from the cord. Microscopic examination shows that the exudation is composed of serum, fibrin, pus cells, and red blood-corpuscles. Usually the exudation is distinctly purulent, being of a greenish-yellow color, but it may be predominantly serous in character. The pus-cells are accumulated around the small veins and capillaries. I have found the ependyma of the fourth ventricle richly infiltrated with pus-cells, which here as well as elsewhere are probably emigrated white blood-corpuscles. The connective tissue cells of the pia-arachnoid membrane are swollen and granular. The lymph spaces around the blood-vessels in the cerebral cortex are often filled with pus-cells. The communication between these peri-vascular spaces and the subarachnoid spaces renders easy the passage of wandering cells from the pia mater into the cortex. There may also be found an increased number of lymphoid cells in the peri-ganglionic spaces. In a similar manner the sheaths of the blood-vessels and the pial processes in the spinal cord may be invaded by pus cells.

"In one of my cases the symptoms of the disease are said to have existed for only twelve hours before death. Here there was an excess of serum in the cerebral and spinal subarachnoid spaces. This serum was moderately turbid. The microscope showed a more abundant exudation of pus-cells than there appeared to be from their gross appearances. The substance of the brain was pale and œdematous, nor was there marked congestion of the meninges."

No constant or uniform lesions occur in the organs of the trunk, and those observed are not distinctive of this disease. Hypostatic congestion of the lungs, bronchitis,

atelectasis, and broncho-pneumonia are common. Pleuritic, endocardial, and pericardial inflammations have occasionally been observed, but are rare. Effusion of serum, sometimes blood-stained, occasionally occurs in the pleural and other serous cavities. The auricles and ventricles of the heart, as already stated, contain more or less blood, with soft dark clots in the more malignant and rapidly fatal cases, but larger and firmer in those which have been more protracted. The spleen is enlarged in less than half the patients. The absence of uniformity as regards the state of the spleen, the fact that in many it undergoes no appreciable change, is important, since this organ is so generally enlarged and softened in the infectious diseases. The stomach, intestines, and liver are sometimes more or less congested, but in other cases their appearance is normal. The agminate and solitary glands of the intestines have ordinarily been overlooked, but in certain cases they have been found prominent. The kidneys in some exhibit the lesions of nephritis. In one of the eight autopsies made by Professor Welch acute diffuse nephritis had been present, as shown by the state of the kidneys. In the case of a child of nine years, treated by Dr. F. A. Burrall, in the Presbyterian Hospital, the urine was very albuminous and the kidneys presented a fatty appearance. Anatomical changes in these organs, however, are not common, unless in slight degree, so that in most patients their function is fully and properly performed.

(To be continued.)

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.[1]

By T. GAILLARD THOMAS, M.D.,
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Dr. Thomas said his motive for presenting the paper was involved in the fact that the plan of treatment of puerperal fever which he should advocate had not been anywhere fully elaborated, or in any single essay carefully systematized. Indeed the general principles of the plan of treatment had not been universally accepted as orthodox, and the question of intra-uterine antiseptic injections for the cure of puerperal septicæmia was one which would still come up for discussion. While the paper contained nothing which had not been elsewhere as fully and as clearly stated, and nothing which had not already received careful investigation at the hands of progressive obstetricians, the author hoped that on account of his large experience, the presentation of his estimate of the method might prove of some value. At the annual meeting of the American Gynecological Society, held four years ago, the subject of intra-uterine antiseptic injections for the cure of puerperal septicæmia was up for discussion, and with a single exception he stood alone in its advocacy. Furthermore, he was among the very first, if not the first in this country, who adopted this method, together with early cutaneous refrigeration in the treatment of this disease. Among all the advancements which have been made in obstetrical medicine he regarded none as more important or more signal than that relating to the prevention and cure of the febrile conditions incident to the puerperal state. Brief reference was then made to the views which have been entertained concerning its exact nature, such as a fever due to suppression of the lochia, inflammation of the uterus and peritoneum, specific puerperal fever, uterine wounds, arrest of the process of formation of milk, the doctrine of the multiplicity of puerperal affections grouped under one name, and the doctrine of puerperal blood-poisoning, etc.

Dr. Thomas then directed attention to the condition of the blood in the puerperal woman, first, being favorable to the development of thrombus, and, second, the existence of a tendency to prove most prolific ground for sepsis and zymosis. Besides this, the nervous system is in a plus state of excitement and sensitiveness. With this general condition there existed several local conditions which result from parturition. Before enumerating these, he briefly alluded to the normal condition of the lymphatics, the blood-vessels, and the uterine tissue, and then described the appearances, as could be seen forty-eight hours after delivery. Outside all looks very well, the uterus is simply much larger than the non-pregnant womb, but the inner surface has an unhealthy, diphtheritic look, although free from exudation. There is a large raw, irregular placental site, and small clots can be seen which cover the mouths of the uterine sinuses. The odor from this surface is disagreeable. On examining the cervix uteri there may be found two or three small lacerations, and, in consequence of these, with absorption through them of irritating lochial discharge, the cervix is swollen and œdematous. Examining the vagina, it is found that in two or three places a superficial rupture of the mucous membrane of this canal has been produced. The vulva also presents several solutions of continuity, the fourchette has been torn through, and this rent has extended perhaps through a small portion of the perineum, and one or two small fissures have occurred in the mucous membrane covering the ostium vaginæ.

Material taken from these surfaces at this stage of the puerperal state, and introduced by inoculation, will give rise to more or less irritation and lymphangitis, but it is not sufficiently poisonous to give rise to erysipelas or angioleucitis. And yet what are the results of parturition? Recovery is the universal rule unless some unusual occurrence manifests itself to prevent this consummation. Notwithstanding the existence of all these circumstances, which are best calculated to insure a bad result, only one or two of one hundred parturient women die when properly cared for, even in public hospitals.

But now and then all this is changed, and some poison gains access to the genital canal, and acts as rapidly and decidedly as a little yeast added to dough, and striking and alarming phenomena develop, spread, and progress steadily toward a fatal issue. At the morning visit the physician leaves the patient with a normal pulse and temperature, and in an apparently favorable condition. A few hours only may elapse when the patient has a scarcely perceptible chill, with some pelvic pain, the lochia ceases, the milk has disappeared, she suffers from severe headache, a look of indescribable anxiety is upon her face, she has a pulse of 120, and a temperature of perhaps 104° F. The poisonous element has reached the genital tract and the result is already manifesting itself. Suppose, now, that the physician remains inactive, or relies upon medicines given by the mouth which are supposed to exercise some control over this poison, the local conditions in the meantime which favor its admission remaining unchanged. The lymphatics are active, lymphangitis follows, cellulitis, peritonitis develops probably, and what was originally a septicæmia will emerge into one of those affections which have been grouped under the general name puerperal fever, and pass through all its attendant phenomena.

PATHOLOGY

At this point the author of the paper proceeded to the consideration of the pathology of puerperal fever, and defined it as a puerperal septicæmia. It matters not whether it assumes a form of phlebitis, cellulitis, lymphangitis, or peritonitis, the essence of the disorder is absorption of poison into the blood of the parturient woman through some solution of continuity in the tissues of the genital tract. As had been well described by Lusk, puerperal fever is "an infectious disease, due, as a rule, to the septic inoculation of the wounds which result from the separation of the decidua and the passage of the child through the genital canal." In other words, he ac-

[1] Abstract of paper read before the New York Academy of Medicine, December 6, 1883.

cepted the definition given by Hervieur as long ago as 1870, who defined this disease to be "a multiplicity of affections produced by puerperal poison."

NOMENCLATURE.

Concerning nomenclature, of late an effort has been made by the Dublin school of midwifery to supplant the old term puerperal fever by the use of the word "metria." Dr. Thomas hoped the suggestion would not be adopted, as the word metria does not convey any more accurate idea of the pathology to the mind of the student than does the old term. Of the two terms metria is more objectionable than puerperal fever. On the other hand puerperal septicæmia conveys a definite and clear idea, which appears to be in accord with the truth as taught us by modern pathology, and it should be adopted despite the fact that it is far from being absolutely perfect.

Dr. Barnes had proposed to use the word in its comprehensive sense, employing it to mean that "the blood of the puerpera is empoisoned," and Dr. Thomas was willing to admit this, although he believed in the existence of a specific poison which acted as surely as does a specific poison in the production of typhus or of smallpox. As to the exact nature of the poison we are not yet able to say; nor are we able to say what the exact nature of the poison is in most, if not all, the infectious diseases. German pathologists declare that the round micrococci especially are important factors in the etiology of this group of affections, but this point in bacterial pathology is too unsettled to permit of its introduction into such a paper as the present one. But even if we do not know what the nature of the poison is, we surely know that some such toxic agent exists, and it behooves us to inquire how it can be best destroyed, or how its life and activity can be best counteracted if it gains admission despite our care and watchfulness. There are only two methods by which it can reach the parturient tract. First, it may be carried into the vulva through the atmosphere; and second, it may be carried to any part of the genital tract by the fingers of the doctor or nurse, towels and cloths laid against the vulva, sponges, and instruments, and by bed and body clothing coming in immediate contact with the genital organs. Dr. Thomas then addressed his remarks to cases occurring chiefly in private practice, because even among the wealthy there is a laxity of system and a carelessness with regard to preventive measures which borders closely upon criminality. It is the duty of every practitioner to guard his patient against puerperal septicæmia by every means in his power.

PROPHYLACTIC MEASURES.

1. In all midwifery cases, whether in hospital or private practice, the floor and ceiling of the room in which the woman is to be confined should be thoroughly washed with a ten per cent. solution of carbolic acid, or a bichloride of mercury solution, one to one thousand. The bedstead and the mattress should be sponged with the same solution. All curtains and upholstering should be dispensed with.

2. The nurses and physician should take care that all their clothing is free from exposure to the effluvia of septic infection, such as typhus, erysipelas, septicæmia, scarlet fever, etc., and if there has been any exposure in this direction all the clothing should be changed and the body should be thoroughly sponged with a saturated solution of boracic acid.

3. As labor sets in the nurse should thoroughly wash her hands with soap and water, removing the dirt from under the nails, administer an antiseptic vaginal injection, repeat it every four hours during labor, and keep a napkin wrung out of the same antiseptic solution over the genitals until the birth of the child.

4. Both doctor and nurse should wash their hands thoroughly with soap and water, and scrape the nails, and afterward soak their hands for several minutes in a solution of bichloride of mercury (1 to 1,000).

5. The third stage of labor should be efficiently produced, all portions of placenta should be removed, and ergot administered in moderate doses three times a day, to be kept up for at least one week, to secure complete expulsion of the clots and closure of the uterine vessels.

6. The doctor should take nothing for granted, but at the conclusion of labor should carefully examine the vulva of the patient. If there is any rupture of the perineum it should be closed at once by suture, and if slight lacerations are found they should be dried thoroughly with a cloth, and equal parts of a saturated solution of carbolic acid and persulphate of iron applied, and again the surface dried with a cloth and painted over with gutta-percha collodion.

7. Within six or eight hours after the termination of labor, syringe out the vagina with an antiseptic solution, and introduce a suppository of cocoa butter containing from three to five grains of iodoform.

8. The vaginal injections should be repeated every eight hours. But in all cases of difficult labor, and in those in which instruments have been employed, they should be administered twice as often, and kept up at least for ten days. The nurse must wash and disinfect her hands before *every* approach to the genital tract of the woman.

9. Employ a new gum elastic catheter which has been thoroughly immersed in an antiseptic fluid each time the bladder is evacuated, rather than trust the nurse to cleanse an old silver catheter.

10. The physician must inform himself *by personal observation* as to the competency of the nurse with regard to the use of the catheter, the administration of the vaginal injections, and the introduction of the suppositories.

It might be objected that so many details with reference to the lying-in woman are unnecessary, because of the enormous preponderance of cases in which complete recovery ensues without such treatment, and that to introduce them savors of the performance of some grave surgical operation. So much the more did Dr. Thomas urge them on this very ground, because he believed that the woman who is to bring forth should be treated as though she is to go through a capital operation.

At this point Dr. Thomas made a strong protest against the use of intra-uterine injections as a prophylactic resource, except after very severe operations in the uterine cavity, which rendered the occurrence of septicæmia almost certain.

But suppose that despite all these precautions the poison has entered, what are the most reliable means for checking the advance of the septic disorder? He did not believe there is any specific disease-germ which give rise to puerperal septicæmia. It is probably the same cause which gives rise to septicæmia in the stump after an amputation, or after a wound with compound fracture, or in the lacerated tract after gunshot wound.

A portion of retained placenta or membranes does not give rise to true puerperal septicæmia, but rather to a toxæmia. If the mere presence of decaying material would produce septicæmia without the agency of a specific disease-germ, the disease would develop in healthy country localities.

As soon as the patient is stricken by the poison, certain morbid phenomena develop themselves, such as chill, high temperature, pelvic pain, mental disturbance, headache, pain in the back, and sometimes, though not commonly, nausea and vomiting.

TREATMENT FOR THE CURE.

First.—As soon as the diagnosis is determined upon, all pain and nervous perturbation should be allayed by a

hypodermic injection of morphine, unless there is some special idiosyncrasy in regard to opium, and throughout the attack, whether suffering in mind or body, the hypodermic use of morphine should be repeated sufficiently often to allay it. In this particular case the drug should be used hypodermically, and special care should be taken to use a clean syringe, dipping the needle before its use into a solution of bichloride of mercury (1 to 1,000), which will prevent the formation of abscess.

Second.—Being relieved of pain, spread an india-rubber cloth over the edge of the bed, making it fall into a tub of water rendered antiseptic by the use of carbolic acid (two and one-half per cent.), or bichloride of mercury (1 to 2,000). Then move the patient very gently across the bed, place a pillow under the head, allow each foot to rest upon the side of the tub, and cover with blankets. Then introduce either a Chamberlain glass tube or a Lyman metallic tube, very carefully guided by the index finger, passing it up to the very fundus of the uterus, attach a Davidson syringe, and throw a stream of water with gentle force against the lining membrane of the organ. If there is any suspicion that there remain attached portions of placenta or membranes, they should be carefully removed, using the finger-nails as a curette, as advised by Dr. Wilson, of Baltimore.

There are dangers attending the administration of these injections: first, the entrance of air into the uterine sinuses; second, the production of hemorrhage; third, the danger of forcing fluid directly into the general circulation through the injection tube into the mouth of the sinuses; fourth, convulsions and violent pain, which pro duce a sudden and baneful influence upon the nervous system, and fifth, the passage of fluid into the peritoneal cavity through the Fallopian tube. All of these may to a very great extent be avoided by careful attention to details. By the use of a large tube, with water not less than 100° F., and using only a moderate degree of force, proceeding gently, cautiously, and slowly, these dangers can be avoided. The tube should not be allowed to fill the os internum or externum completely. If after the use of the injections it is found that the cervical canal hugs the tube too closely, it should be dilated before further injections are practised, and this may be done by the use of either the hard rubber or Barnes dilators. If hemorrhage occurs, persulphate of iron should be added to the antiseptic solution and ergot administered.

The frequency of the administration of the intra uterine injection should be varied greatly with individual cases. In moderate cases, where the temperature falls readily, only once in five hours may be all that will be required, while in other cases they may be required every three hours, and in bad cases they may be administered as often as every hour. These injections should be administered by the physician always, and should be carried up to the fundus uteri, and every precaution exercised concerning detail. Dr. Thomas favored the intermittent stream. For a number of years he entertained the idea that the continuous flow was most desirable, but on that point he had changed his opinion entirely. Continuous irrigation he regarded as a delusion and a snare. For vaginal irrigation it is an excellent method; nevertheless, in severe cases he preferred to employ continuous irrigation and use the intermittent stream every three hours rather than exhaust the patient by the use of injections as often as seemed desirable. At all events, that plan is best which best cleanses the parturient canal.

Third.—Control the temperature by the use of Townsend's rubber-tube coil, placed over the entire abdomen, from the ensiform cartilage to the symphysis pubis, with ice-water flowing through it. In his service at the Woman's Hospital this means of controlling the temperature is as commonly and freely used as are gargles for diseases of the throat, and thus far no ill-effects had been produced, either in the way of chilliness or by the development of complicating diseases, such as pneumonia, pleurisy, etc. Formerly he relied upon Kibbee's cot for the same purpose, but had found the coil much more convenient.

Fourth.—Keep the nervous system under the influence of quinine, fifteen grains night and morning, or Warburg's tincture administered in capsule, according to the recommendation of Dr. John T. Metcalf, or by the use of salicylate of soda.

Fifth.—The diet should consist of fluid food, and the staple article should be milk, but animal broths may be alternated with it.

Sixth.—Efficient and abundant assistants. Two nurses are necessary, one for night and the other for day, and at least one extra physician as an assistant, in order to carry out this method of treatment effectually.

In regard to the antiseptic substances used, they have been thymol, boracic acid, salicylic acid, carbolic acid, and bichloride of mercury. The last two are the best, and the bichloride seems to be about to supersede the carbolic acid, and for intra-uterine injections it should be used in the strength or 1 to 2,000.

POINTS OF INTEREST IN CHOREA.[1]

By HENRY D. CHAPIN, M.D.,

ATTENDING PHYSICIAN TO THE CLASS FOR DISEASES OF CHILDREN, OUT-DOOR DEPARTMENT, BELLEVUE HOSPITAL.

THE child's service at the Out-door Department of Bellevue Hospital offers an inviting field for the clinical study of chorea. Many of the children brought there for treatment come from the poorest and most neglected classes in the city, among whom bad food and air readily produce the hydræmia and other predisposing conditions of this disorder. An analysis of a number of cases that have come under my observation may be of some interest, as repeated clinical observations are needed to verify certain points about this interesting and obscure disease. Perhaps the relation of rheumatism to chorea is one of the most important of these points. Various observers differ as to the closeness of this relation, some considering the rheumatism to act only as a depressing agent in the production of chorea, while others assign to it a much more intimate causative relation. In the histories of thirty-eight cases of chorea, twenty-two were preceded or accompanied by rheumatism, while in the remaining sixteen no such connection could be found. In two of the latter cases, however, one of the parents had been subject to rheumatic attacks. The intensity of the rheumatism varied within very wide limits, sometimes being so pronounced as to leave no doubt as to its character, and again taking on such mild manifestations in the shape of the so-called growing pains as to need careful investigation in order to discover its true nature. Two cases will illustrate:

Rosanna K——, aged thirteen, was brought to me suffering from twitching in all the voluntary muscles. A month previous she had an attack of rheumatism, first in the right knee, then in the left knee, and finally in both ankles, accompanied by pain and some swelling. Two weeks afterward the twitching began on the left side. On examination she was found to have a mitral regurgitant murmur. No history of rheumatism in the family.

Maggie C——, aged nine, complained some about two months ago of wandering pains in legs and ankles. These pains would only last for a few days and then disappear, without preventing her from going about in any way. Two weeks ago her mother noticed that she was getting very fidgety, which ended in well-marked twitching of the face and both arms. She was also found to have mitral insufficiency. Her father and mother have both had rheumatism. In this case I have no doubt that the vague pains complained of were truly rheumatic,

[1] Read by invitation before the New York Neurological Society, November 6, 1883.

in view of all the facts of the history. Assuming that there is a close connection between chorea and rheumatism, it is difficult to determine exactly the relative influences these diseases have upon one another. Thus it is a point of uncertainty whether the same morbid underlying condition predisposes to both rheumatism and chorea, or whether the state of the system left by the rheumatism is one of the principal factors in producing the chorea. I have had several instances in which rheumatism has followed an attack of chorea, and where no previous rheumatic history could be obtained. The following is from my note-book:

April 2, 1883.—Bartholomew C——, aged eight, has always been pretty healthy. Has no history of rheumatism or growing pains, and his father and mother have never been rheumatic. Two weeks ago he seemed to fail somewhat and had some loss of power in his left arm, soon followed by twitching of the left hand and arm. He came to me again on April 12th, saying that a few days previously he had been seized with pains in both knees, which spread up and down his legs. The pains were so severe that he could hardly get up stairs, but they disappeared in about a week and have not troubled him since. Dr. A. R. Robinson, who for some years had one of the children's classes at Bellevue, tells me that in a number of cases he found a chorea to follow rheumatism, in which rigid inquiry seemed to show that a previous rheumatism had not been overlooked. In one case he treated a girl for chorea who had no history of rheumatism, but about two years afterward she was seized with an acute inflammatory affection of the joints. Rahn, in his article on rheumatism in Gerhard's "Handbuch der Kinderkrankheiten," states that Sée mentions five cases in which chorea preceded the rheumatism, and that Roger reports six such cases. Soltmann, in his article on chorea, in this connection quotes Roger, who thinks that chorea and rheumatic affections of the joints, and heart affections, are members of one and the same pathological condition. Therefore he makes a division into chorea rheumatica, chorea cardiaca, and chorea rheumatica-cardiaca, and he is unable to state which process makes the commencement. Often the chorea is primary and the heart affection secondary, or *vice versa*, or the heart affection and the chorea appear at the same time. Again, the chorea may appear first, then the rheumatism, and lastly the heart affection; but generally the rheumatism is first, next the chorea, and the heart affection afterward. I have never seen a case in which cardiac disease followed chorea without any previous rheumatic history. Certain German authors deny any special connection between rheumatism and chorea. Thus Romberg, in the majority of cases, can see no relation between the two diseases, and Soltmann, in the article already mentioned, states that Steiner in two hundred and fifty-two cases found acute inflammatory rheumatism only four times. Rahn, in the "Handbuch der Kinderkrankheiten," concludes, after most careful examination, that there is no special connection between the two diseases. He found in eleven cases of chorea that there were ten in which the heart was normal and in which there was no rheumatism, and thinks that what little connection there may be between the affections varies according to different localities. The statistics published in this paper, together with those previously found, show, I think, that in this locality the connection between the diseases is very close. I have a history of one case in which a girl during the course of three years had three attacks of chorea, each attack being immediately preceded by rheumatism. Most observers have noticed that children with chorea frequently have rheumatic parents, and Rahn himself, in his article, quotes several cases in which rheumatic parents had two children, one of whom had rheumatism and one chorea.

In taking histories of chorea, I think that merely being satisfied with a negative answer when the parent is asked if the child has had rheumatism may not be sufficient always to arrive at the truth, but that a little more careful investigation should be made to see if such a condition may not have been overlooked. According to Roger it is oftenest the milder or subacute cases of rheumatism that are followed by chorea. Henoch also states that chorea follows, with equal frequency, mild rheumatic conditions. It is well recognized by the authorities that rheumatism in early life has often a much lighter manifestation than in adults. The pain may be but slight and the swelling of the joints absent, or, if present, quickly disappearing. The redness may be trifling, or not exist at all. The temperature is rarely high unless complicated by endocarditis. Children thus affected are seldom confined to the house and often go to school, although constantly complaining some of pain and stiffness—in fact, their parents, when questioned, will say they have had growing pains. I think careful observations will identify in many cases these growing pains with rheumatism. Organic heart disease is by no means infrequent in children, and in many cases I have only been able to get a history of such preceding pains as a cause. While certain infectious diseases may produce endocarditis, yet in children, as in adults, its most frequent cause is rheumatism, and in them this light form is often its only manifestation. I have recently had an interesting case under observation of cardiac disease in a girl of eleven years. Measles and pertussis are the only diseases she has had, but for the last eight months she has complained off and on of some pain and stiffness on exertion in her knees and ankles. There has been no swelling nor redness. A month ago she had such an attack, followed in about a week by pain in the chest, with a gradually developed intense dyspnœa. When I saw her she had marked pericarditis with effusion, with a friction sound at the base. When the fluid had sufficiently subsided I discovered enlargement of the heart, with a double aortic and mitral regurgitant murmur, showing that an endocarditis had followed one of these previous attacks of slight pains. The child dying suddenly, I obtained an autopsy. The pericardium was adherent to about half its extent, and where free both layers were covered by a thick layer of fibrin. The heart muscle was soft and fatty, showing all the evidences of a recent and general myocarditis. The whole endocardium on the left side of the heart was inflamed, with the mitral valves retracted and partially bound down. Fine fibrinous vegetations were seen on the aortic valves. Here, then, there was complete destruction of a heart from a rheumatism whose chief manifestation was a stiffness in the knees. In making a history of growing pains stand for a previous rheumatism it is obvious that a certain limitation and care must be exercised, especially among the lower classes, who are apt carelessly to give an affirmative answer to questions asked by the physician. Thus simple bruises or sores must be eliminated, also the muscular weariness developed in weakly children by over-exercise, the products of tissue metamorphosis being imperfectly removed by the feeble circulation, with resultant irritation and pain. But rheumatic pains usually go from one joint to another, or from one set of muscles to another, and exist independently of any such factors as injury or over-exercise. After all such sources of error have been carefully guarded against by rigid questioning and examination, I think it will remain true that many, perhaps the majority of such pains existing in the child are really rheumatic, and I have so considered them, when other causes could be satisfactorily eliminated.

Among 31 cases there were only 4 in which I could satisfy myself of the existence of organic heart disease. These statistics are somewhat at variance with those of some observers. Thus Radcliffe quotes Dr. Hillier as having noticed in 37 cases of chorea that there was probably organic disease of the heart in 25, and functional derangement in 4, while in 8 only was there no sign of cardiac disturbance. A peculiar functional irritability of the heart was present in most of my cases.

This often took the form of palpitations, and in over half the cases the heart was at times markedly irregular. In 2 cases the pulse was intermittent. In one or two instances young boys confessed to me that they were in the habit of cigarette-smoking, but beyond this I could find no cause, except the chorea, for this arythmia of the heart.

In an article in the *Medical News* of August 25, 1883, Henry G. Berkley, M.D., reports an autopsy made in a case of chorea. Upon microscopic investigation he found a pigmentary alteration of the nuclei of the vagi, and suggests that this may afford some explanation of the common implication of the heart in the choreic movements, with or without valvular lesions; that possibly the disease may cause loss of the inhibitory function of the pneumogastric nerve, with resultant irregular action of the heart muscle.

Among 35 cases 18 had a condition of general chorea, 8 had hemichorea on the right side, 5 on the left side, and in 4 the face and both hands and arms were affected, but not the lower extremities. In several instances the first point noticed was that the child could not grasp things well, as seen by dropping plates or other objects. This ataxic condition was soon followed by well-marked twitching. I have notes on two cases of chorea of the respiratory muscles and larynx, and as this subject is not generally noticed in the books, it may be of interest to detail their histories.

The first case is being treated by Dr. Landon Carter Gray, at the Polyclinic, and it is by his kind permission that I have made notes of the case and have the honor of presenting the boy before the Society. Willie D——, aged fifteen, has been troubled with twitching for the last eight years. It began in his hands, and next went to face and head, when it soon became general. His father, mother, and grandmother on his mother's side, have all had rheumatism. The affection of the respiratory muscles came on a year after the chorea began, and has lasted ever since. The sound has remained about the same during the seven years of its continuance. It stops entirely during sleep, and he says it is worse on rainy days. The barking noise is made during expiration. By placing the hands over the chest and back the expiratory muscles are felt suddenly to contract. I made a laryngoscopic examination in his case, and the cords seemed normal. While making the examination there was a sudden spasm of the pharyngeal muscles, the epiglottis was raised, and the adductors quickly contracted the glottis with the production of the peculiar bark. At times there is only a spasmodic action of the expiratory muscles, the adductors of the larynx not being involved, and hence only a sudden rush of air is produced, without the barking sound. There is some paralysis of the soft palate. The general chorea has continued throughout this affection, and three weeks ago he had a slight attack of rheumatism.

Dr. French, of Brooklyn, has kindly given me notes of an interesting case of chorea of the respiratory muscles and larynx which occurred in his practice. Charlie N——, aged nine, has no history of rheumatism. About four years ago he began to have choreic movements in the head and face, shown by twitching of the eyes, grinning, biting the lips, etc. These movements lasted for several months and then stopped for an entire winter. His mother then noticed that he began to make a peculiar involuntary sound. Upon consulting the doctor, he found the child to be suffering from choreic spasms of the muscles of the chest, abdomen, neck, and larynx, producing a forced expiration with a peculiar squeaking sound. The doctor says this sound was as much like the squeak of a young turkey as anything else. It would occur at the beginning, middle, or end of the expiration, which would be suddenly interrupted. At times as many as four distinct sounds were heard with one expiration, and whenever this happened there was invariably only one sound produced during the next expiration. Upon the beginning of these sounds the face movements had ceased, but on one occasion they returned for two days, when the laryngeal sounds ceased. When the head and face movements again stopped, the sounds began again. In fact a peculiar feature of the case was that whenever there was twitching in any other part of the body the laryngeal sounds would cease, as if the disease were unable to institute the choreic contractions in the respiratory and laryngeal muscles and the general voluntary muscles at the same time. On laryngoscopic examination the motions of the cords were plainly seen. The sounds always ceased entirely at night. A rough scraping of the throat frequently alternated with these sounds. The mucous membrane of the larynx grew somewhat congested as a result of this scraping. The sounds all disappeared after three months' general treatment, and have not returned, except very infrequently. True laryngeal chorea has no sound, as no current of air is present to cause the cords to vibrate. As soon as a sound or bark is produced it ceases to be purely laryngeal, as the expiratory muscles are involved. Their spasmodic contractions can be felt by the hand. I think the only case of true laryngeal chorea ever reported is by Dr. Knight, of Boston. In a woman of forty-two years the vocal cords were driven together with such force that he could hear them strike, but no sound was produced.

In only seven out of thirty-three cases could I get a history of such a cause of chorea as fright or mental excitement, and in four of these there was an accompanying rheumatic history. As an example, Mary O'B——, aged eleven years, had come to me six months before, suffering from rheumatism in both knees and legs. Although there was no noticeable swelling when I saw her, she could scarcely walk; she recovered under treatment, but returned in a few months affected by a general chorea. I learned that her father was a confirmed drunkard, and had recently exercised much terrorism over the girl. In three cases, however, there was nothing but pure fright to account for the chorea. Thus, Lizzie S——, aged ten years, had always been pretty healthy, and there was no history of rheumatism in herself or family. Upon a certain occasion a teacher had punished her frequently for some offence, which was soon followed by a general twitching. As a general rule, I have noticed that children attacked by chorea are those who are intellectually rather bright than otherwise. If they are stupid, it is probably a psychical change induced by the disease, as inquiry often elicits that they were studiously inclined and ambitious of standing well at school. Radcliffe states that children attacked by chorea are usually distinguished by vivacity and restlessness of disposition, although there may be a vacancy of countenance resulting from a semiparalyzed condition of the features.

With reference to age and sex, I have statistics of 324 cases. Out of these, 288 have come for treatment to the Out-door Department of Bellevue Hospital since April, 1878, and I am indebted to the courtesy of Dr. C. L. Dana for 30 out of the remaining 36 cases. Among these 324 patients, 228 were girls and 96 were boys. M. Sée in his 531 cases had 393 girls and 138 boys. All statistics show the girls to largely preponderate in this disease.

The following is the record of the ages: 3 years and under, 5 cases; at 4 years, 3 cases; at 5 years, 14 cases; at 6 years, 19 cases; at 7 years, 35 cases; at 8 years, 53 cases; at 9 years, 40 cases; at 10 years, 39 cases; at 11 years, 41 cases; at 12 years, 34 cases; at 13 years, 20 cases; at 14 years, 16 cases; at 15 years, 5 cases.

The ages most frequently attacked, according to these figures, are, first, 8, next 11, next 9, next 10, next 7 years, and so on. From the histories of the 531 cases that were collected by M. Sée at the Children's Hospital, Paris, he finds that the greatest frequency of chorea is between the 6th and 10th years. Of the children under

3 years, 1 was 7 months and another 1 year old. Rare cases of congenital chorea, and that observed in infants at the breast, have been occasionally recorded. Von Ziemssen quotes Richter as mentioning two cases of congenital chorea occurring in girls whose mothers had received a severe fright late in pregnancy. From their birth the children were attacked with clonic spasms, which gradually almost wholly disappeared. In order to determine whether different seasons had any influencing effect on these cases, I have taken from the entry-book at the dispensary the number of patients with chorea registered for the last two years, at different periods in the year, with the following result: From November 1, 1881, to May 1, 1882, 30 cases; from May 1, 1882, to November 1, 1882, 34 cases; from November 1, 1882, to May 1, 1883, 36 cases; from May 1, 1883, to November 1, 1883, 29 cases. These figures show about the same ratio for all parts of the year.

With reference to treatment, I have been guided by a routine, which, although rather unvarying, has generally been successful. It is rare in an out-patient service to see those severe and aggravated cases that seem to defy all kinds of therapeutics, and none of my cases have been of this character. They have been of a mild or moderately severe type, and have usually yielded to the general combination of arsenic and iron. In children of from eight to ten years I have started with five drops of Fowler's solution, combined in a prescription with about five grains of the citrate of iron and quinine. If within a week or so there have been no signs of improvement, I have slightly increased the dose of arsenic, but I have never been obliged to push it to toxic doses. In other cases, where there has been much anæmia, I have given ten drops of the tincture of the chloride of iron with the arsenic, largely diluted with water, after each meal. I have also directed the children to be removed from school, and freed from all mental restraint; also to have as generous a diet as possible, and plenty of out-door exercise.

The expectant plan of treatment, based upon perfect hygiene and the best diet, has sometimes been advocated for chorea, to the complete exclusion of medicinal treatment. In the "Proceedings of the Kings County Medical Society for December, 1878," Dr. Landon Carter Gray makes a comparison of the arsenical with the expectant plan of treatment. A number of cases were kept under observation from the beginning of treatment to the entire disappearance of all symptoms. The treatment was entirely arsenical, no directions being given as to hygiene or food. The results were then compared with a number of cases published by Drs. Gray and Tuckwell in support of the expectant plan, when he finds a balance of twelve days in favor of the arsenical treatment. While arsenic is undoubtedly the best for routine treatment, certain other measures may hasten the cure. Thus, if the child is vigorous enough, the cold plunge may be employed; also cold affusions to the nape of the neck and along the spine, with frictions. Rhythmical gymnastic exercise is sometimes beneficial. Dr. C. L. Dana, in a paper read at the last meeting of the American Neurological Association, claims that he has found anodal galvanization a valuable adjunct in the treatment of chorea. It was found that by applying it daily for a week or ten days, with arsenic, he materially shortened the duration of the disease. His method of application is as follows: "A large sponge electrode of flexible brass, four by two inches, is thoroughly moistened with salt water. The hair of the patient is also thoroughly wetted, and the electrode applied over the sides of the head, above the ear. In hemichorea it need only be applied over the side opposite to the one affected. The other electrode is placed in the hand of the affected side. The electrode upon the scalp is made positive, and a stabile current of three to six Stöhrer's, four to eight Daniell's cells is used."

[817 West Forty-ninth Street.]

A NEW METHOD OF STAINING BACILLUS TUBERCULOSIS.

By T. J. BURRILL, M.D.,
CHAMPAIGN, ILL.

Having had considerable experience in the use of the alcoholic solutions of aniline dyes for staining bacteria, and having for some months used solutions in glycerine instead, I have come to much prefer the latter. Evaporation of the solvent is avoided, and in consequence a freedom from vexatious precipitations is secured, and more uniform and reliable results are obtained. There is, moreover, with the alcoholic mixtures a tendency to "creep," or "run," by which one is liable to have stained more than he wishes—fingers, instruments, table, etc.

From these things the glycerine mixtures are practically free, and there are no compensating drawbacks. For staining *bacillus tuberculosis* the following is confidently commended as preferable to the materials and methods heretofore in use. Take glycerine, 20 parts; fuchsin,[1] 3 parts; aniline oil, 2 parts; carbolic acid, 2 parts.

The solution is readily and speedily effected, with no danger of precipitation, and can be kept in stock without risk of deterioration. When wanted for use, put about two drops into a watch-glass (a small pomatum-pot is better) full of water and gently shake or stir. Just here there is some danger of precipitating the coloring matter, but the difficulty is easily avoided by gentle instead of vigorous stirring. After the stain is once dissolved in the water no further trouble occurs; if any evaporation takes place by being left too long, it is the water that goes, not the main solvent. The color should now be a light, translucent red, much too diffuse for writing-ink. Put in the smeared cover-glass, after passing it a few times through a flame, and leave it, at the ordinary temperature of a comfortable room, half an hour. If, however, quicker results are desired, boil a little water in a test-tube and put in about double the above indicated amount of the glycerine mixture, letting it run down the side of the tube, gently shake until absorbed, and pour out the hot liquid into a convenient dish and at once put in the cover with sputum. Without further attention to the temperature the stain will be effected within two minutes; but the result is not quite so good, especially for permanent mounts, as by the slower process.

After staining put the cover into nitric (or hydrochloric) acid and water, one part to four, until decolorized, say one minute; wash in water and examine, or dry and mount in balsam.

If it is desired to color the ground material, which is not necessary, put on the decolorized and washed glass a drop of aniline blue in glycerine; after one minute wash again in water and proceed as before.

Almost any objective, from one-fourth inch up will show the bacilli if sufficient attention is paid to the illumination.

[1] The common red aniline of the drug stores.

Salts of Nickel.—Dr. J. M. Da Costa has been testing the therapeutic value of the salts of nickel. The sulphate proved of some value in obstinate diarrhœa. The bromide, however, is the most valuable of all, and will probably take a permanent place in the materia medica. Its action is similar to the other bromides, but a much smaller dose suffices. Five to seven and a half grains is an average dose, and ten grains is a decided one. It relieves congestive forms of headache and quiets the system generally. In epilepsy it does quite as well as other bromides, but, as above mentioned, a much smaller dose suffices.

General Prevalence of Small-pox in Mexico.—The *Mexican Financier* warns foreigners that, before they come to Mexico, they should be vaccinated, as small-pox is generally prevalent in the country.

THE THERAPEUTICS OF DIPHTHERIA.

By DIFFERENT AUTHORITIES.

ALFRED STILLÉ.—*Local.*—Ice in mouth and on neck first stages. Alum or tannin by insufflation; muriatic acid by a brush; potassium chlorate; tincture iodine; lactic acid is a good solvent of the membrane; carbolic acid; potassium permanganate. *General* treatment is the indication, as the membrane will return till the cause is removed. Emetics may be advantageous in the early stage. "Supporting of nature is the only way to treat;" nature will eliminate the poison; in grave forms, stimulate; alcohol and stimulant doses of quinia; tincture of chloride of iron is absorbed, constringes the blood-vessels, and previous exudation; food is the greatest of all indications; opium diminishes waste and nervousness; it also aids in the appropriation of other stimulants; alcohol can be borne in large doses; fluid beef, milk, farinacea; Huxham's tincture. In cases of medium intensity, give tonics rather than stimulants. Tracheotomy is fatal in about three-fourths of the cases. It is advisable under favorable circumstances.

J. SOLIS COHEN.—The two main indications consist: 1, in keeping up a supply of nourishment and stimulants, and 2, in providing for the detachment and discharge of the morbid accumulations when they threaten to occlude the air-passages. The sick room must be systematically disinfected. This is done by the free use of sprays of carbolic or sulphuric acid. Solutions of the sulphate of iron or some other disinfectant are kept in all the vessels which are brought into the sick-room to receive the discharges, the soiled clothing, refuse food, and slops of the patient.

He regards the chlorine compounds as of more efficacy in diphtheria than all other remedies. Of these he prefers the tincture of the chloride of iron, which must be administered at frequent intervals and in large doses—from five to thirty drops, according to age and vigor of patient, should be given from every half hour to every second hour as the case may be. It is given in glycerine and water, or in diluted syrup of lemon. Dr. Cohen prescribes chlorate of potassium very frequently in this disease—in the form of *chlorine* mixture (made of an equal number of grains of the chlorate and of drops of hydrochloric acid, in plain or aromatic water, or in the infusion of quassia). He always suspends the use of this remedy when there are any symptoms of renal irritation produced by it.

He administers the hydrochlorate of quinia (in preference to the sulphate) as a tonic, antipyretic, neurotic, and antiseptic. It is to be given in decided doses. When deglutition is painful it is given by enema, with proper augmentation of the dose.

Alcohol, in the form of strong wine, or as brandy or rum, is regarded as of the utmost importance when the system begins to give way. It should be given after the earliest manifestations of decided loss of vigor. At this stage it is of more importance for the time being than any remedial agent. From f℥ ss. to f℥ j. of brandy are to be given at intervals of from fifteen minutes up to three hours. As long as it is well borne it may be given to any extent short of intoxication. Children readily take a sort of syrup of brandy made by burning it beneath a lump of sugar, which becomes melted in the process. At moments of sinking he regards carbonate of ammonium as valuable. He gives from two to ten grains by the mouth, in syrup of acacia, or from eight to forty grains by the rectum. At moments of collapse the ammonia is given by intravenous injection.

The sore throat is treated by pellets of ice placed in the mouth and renewed more or less cautiously. The use of ice-compresses is not approved. It is thought better to apply warm cotton batting, spongio-pilin, or an actual cataplasm, or to anoint the neck with oil, lard, or cosmoline, care being taken not to abrade the cuticle lest local infection arise as a complication. Morphia is administered when great pain arises.

Morbid products in the pharynx and nasal passages undergoing detachment should be promptly removed. This morbid product is kept diffluent as much as possible by maintaining an excess of humidity in the atmosphere of the room by keeping a steaming vessel of water on the stove. The uninvaded tissue should never be cauterized. Applications of the tincture of the chloride of iron should be made to the pseudo-membrane with a swab of cotton or sponge. After this application the attempt may be made to remove the deposit by gargle, spray douche, or syringe; employing lime-water as the medium. Forcible removal of the deposit is not regarded as judicious.

When the larynx is invaded Dr. Cohen keeps a constant stream of steam in motion directed over the patient's face. Whenever the respiration becomes obstructed, a few pieces of lime about the size of the fist are slacked by the bedside every hour or so, covering the vessel in which they are slacked with a hood of stiff paper, so as to direct the steam and particles of lime toward the mouth of the patient.

The use of emetics is indicated in children to provoke expectoration from the air-passages in the act of vomiting; but the same indication does not occur in adults who are able to expectorate voluntarily. If successful, the emetic may be repeated, at intervals of six hours, as long as the indications continue to recur. Alum, ipecac, and turpeth mineral are the most reliable agents, and may be tried in the order named; adhering to the alum if it prove efficient. Emesis should not be carried too far, or be repeated if ineffectual, as it exhausts the power of the system without any compensation in the discharge of morbid products.

Should asphyxia be threatened from accumulations in the larynx or trachea, tracheotomy is indicated, and, though most frequently unsuccessful in averting death, it facilitates due access of atmospheric air to the lungs, and often saves lives that would otherwise be lost. The most careful attention is required after tracheotomy to keep the artificial passage clear. The stimulating treatment and the lime inhalations should not be discontinued. The two main indications for favorable prognosis after tracheotomy are desire for food and ability to expectorate. All treatment should be subservient to facilitating these great ends.

BARTHOLOW believes that there are two objects to be kept in view in the treatment of diphtheria:

1. To modify the course and shorten the duration of the disease; 2, to obviate the tendency to death.

First head.—The application of topical agents to the fauces and the administration of internal remedies according to symptoms.

He entirely disapproves of caustic and acid applications as inviting the disease to the adjacent portions of the mucous membrane by destroying the epithelium. He does not think much of the value of benzoate of sodium. The application of sulphur, in the form of powder, by insufflation or by blowing it over the whole diseased surface as far as it can be reached, he believes to be a good treatment. He regards lime-water and lactic acid as of value as solvents. Some pieces of freshly burned lime are put in water, and the patient directed to breathe the vapor as it rises, or a solution of lactic acid strong enough to taste distinctly sour is freely applied to the throat by a large mop. He places no value in the use of chlorate of potassium or tincture of the chloride of iron as faucial remedies. When gangrenous sloughs are thrown off from the throat, carbolic acid is indicated, a one per cent. solution—not stronger than one per cent. This solution may be applied either by mop or syringe. When the exudation extends into the nares, the spray of a one per cent. solution of carbolic acid is gently thrown into them and kept up until the two canals are pervious, thus preventing the extension

and decomposition of morbific materials and the consequent swelling of the deep cervical glands and possible development of septicæmia. It is only when the exudation extends into the nares that much good can be accomplished by topical applications—so thinks Dr. Bartholow.

Second head.—The prevention of the diffusion of the morbific agent, of the development of septicæmia, and of failure of the heart.—With the earliest appearance of an exudation in the fauces, from two to ten grains of the bromide of ammonium are given every three hours. It is believed that the diffusion of this agent through the mucous membrane of the respiratory organs, and so out of the mouth, detaches the exudation. To prevent septic decomposition he advises the use of a drop or two of Lugol's solution in water every hour or two. This drug is to be given when the exudation is fully developed and spreading. He uses alcohol steadily, pushing it in large doses as an antiseptic agent. Quinia is also considered valuable in this same connection. Dr. Bartholow does not believe in the extraordinary powers of chlorate of potassium in this disease, as claimed by many. He fears its injurious effects on the kidneys.

As food, milk, egg-nog, and beef-tea are given freely about every three hours.

ABRAHAM JACOBI sums up the treatment as follows: Every case should be treated on general principles with symptomatics, roborants, stimulants, febrifuges, externally, internally, or hypodermically.

The uncertainty of the termination and the frequency of collapse, or sepsis, prohibit procrastination. Waiting long means often waiting too long. Alcohol is a very important adjuvant and remedy.

The dose must often be apparently large, from two to twelve ounces daily, according to the circumstances.

Depletion is absolutely contra-indicated. Debilitating complications, such as diarrhœa, must be stopped instantly. Stomatitis, chronic pharyngitis, hypertrophy of the tonsils, glandular enlargements, must be relieved or removed preventively. Acute catarrh of the mouth and pharynx requires the use of potassium or sodium chlorate, in doses not exceeding a scruple daily for a child of a year, one to two drachms for an adult. The single doses must be small and very frequent—every hour, half, or quarter hour. Large doses are dangerous, result often in nephritis, and have proved fatal. The main indication in local diphtheria is local disinfection. To disinfect the blood effectively we have no means. Salicylic acid changes into a salicylate which is no longer a disinfectant. The amounts of disinfectants required to destroy bacteria are so great that the living body could not endure them. But the discipline of the house, school, and social intercourse can be so modified as to prevent the spreading of an epidemic. The inhalation of steam is very useful in catarrh of the respiratory organs, and also in inflammatory and diphtheritic affections. In fibrinous tracheo-bronchitis it has proved quite successful. But it may also prove dangerous by excluding oxygen and overheating the room or tent. Drinking large quantities of water, with or without stimulants, also excites action of the muciparous glands and aids in macerating membranes. The internal use of ice, and its local application to the affected parts, can be very useful. But the cases must be selected for each and any of the remedial agents and applications. The use of baths and the cold and hot pack is controlled by general indications. The usefulness of lime-water and lactic acid has been greatly overestimated. Glycerine is a valuable adjuvant, both internally and externally, but nothing more. Turpentine inhalations are deserving of further trials, though they are more effective in purely inflammatory than in diphtheritic processes. Inhalations of chloride of ammonium act favorably in catarrhal and inflammatory conditions, and deserve a trial for the purpose of aiding maceration of membranes. Mercurials are contra-indicated in the septic and gangrenous forms of diphtheria, but in those which assume the purely inflammatory character, with less constitutional debility and collapse, as in sporadic croup or in fibrinous tracheo-bronchitis, some reliable clinicians claim good results. Astringents, such as alum, do not work favorably. Chloride of iron is among the most reliable of antiseptic and astringent agents. Small doses at long intervals are quite useless. Moderate doses frequently repeated have a satisfactory general and local effect. A child of a year must take at least a drachm daily; a child of three or four years, from two to three drachms. The same or larger doses for an adult. The chloride is to be mixed with water and glycerine in various proportions, so that a dose is taken every hour, every half-hour, every ten minutes. Thus the local applications to the throat become almost superfluous. Potassium or sodium chlorate, half a drachm daily, may be added with advantage. Carbolic acid is useful both in local and internal administration. According to the end to be reached, it may be used either in concentrated form or in a one per cent. solution. Internally, in doses of a few grains to half a drachm daily. Salicylic acid acts as a caustic when concentrated; in moderate solutions it destroys fetor; salicylates are anti-febrile only. The anti-febrile effects of quinia are not so favorable in infectious as in inflammatory fevers; its antiseptic action is not satisfactory in practice. Deliquescent caustics are dangerous. Injury of the healthy mucous membrane must be avoided. Mineral acids, and particularly carbolic acid, when their application can be limited to the desired locality, are preferable. Bromide, both internally and externally, is warmly recommended by Wm. H. Thompson. Boric acid, in concentrated and milder solutions, has been recommended as a local application to membranous deposits generally, and to the diphtheritic conjunctiva in particular. Membranes must not be torn off, and not removed unless they are nearly detached. Caustics are contra-indicated, except where their application can be limited to the diseased surface. No healthy part must be torn. Swelled lymph glands require ice, iodine, iodoform, mercury, poultices, incision, carbolic acid, according to circumstances, and at all events frequent and careful disinfection of the mucous membrane from which their irritation originates. Diphtheria of the nose is apt to be fatal unless careful treatment is commenced at once. It consists of persistent disinfection of the nares and pharynx by injections. The tendency to sepsis forbids a long intermission of them. They must be continued day and night, for one to several days, no matter whether the glandular swelling be considerable or not. Laryngeal diphtheria proves fatal in almost every case, unless tracheotomy be performed. It is less successful the more the epidemic or case bears a septic character. Emetics are useful for the removal of the half-detached membranes. Diphtheritic paralysis requires good and careful feeding—iron, strychnia, the faradic or galvanic currents, friction, hot bathing. Urgent cases indicate the hypodermic administration of strychnia. Diphtheritic conjunctivitis is benefited by ice and boracic acid; cutaneous diphtheria by local cauterization and disinfection, besides general treatment.

C. E. BILLINGTON recommends the following prescriptions:

No. 1.—Iron and Glycerine Mixture.

℞. Tinct. ferri chloridi ..... f ʒ j.
Glycerinæ,
Aquæ ..... ää f ℥ j.

M. Sig.—A teaspoonful of this and of No. 2, alternately, every half-hour through the day.

No. 2.—Chlorate of Potassium Mixture.

℞. Potassii chlorat ..... ʒ ss.
Glycerinæ ..... f ℥ ss.
Aquæ calcis ..... f ℥ ijss.

M. Sig.—A teaspoonful of this and of No. 1, alternately, every half-hour through the day.

No. 3.—Spray Mixture.

℞. Acid. carbol..... ♏ xv.
Aquæ calcis..... f ʒ vj.
M. Sig.—To be used with a small hand atomizer.

The patient is allowed to sleep for an hour or two at a time at night. When awake, doses of Nos. 1 and 2 are alternated every half-hour. The throat is sprayed with No. 3 for several minutes at a time, whenever Nos. 1 and 2 are given. In spraying, the mouth is opened widely.

Where there is nasal implication the nose is thoroughly syringed out with warm or tepid salt-water, once, twice, or three times a day. This syringing is done with the patient's head inclined forward; a two-ounce hard-rubber ear syringe is used.

Dr. Billington never applies any brush or swab to the throat. He sometimes throws a drachm of No. 1, with a syringe, directly against the affected surface in the throat. He does not give quinia or any other unpleasant medicine to children. He does not give alcoholic stimulants except where a child, who cannot be induced to take other nourishment, will take weak milk-punch or egg-nog.

The patient is nourished with an abundance of cold milk, given frequently, to which a little lime-water is often advantageously added. When the stage of extreme exhaustion has been reached in bad cases the juice squeezed from beefsteak is given.

Progress of Medical Science.

Muscular Atrophy in Rheumatism of the Joints.—Dr. Luigi Petrone (*Lo Sperimentale*) has collected a few cases in which muscular atrophy accompanied or followed immediately upon rheumatic inflammation of the larger joints, especially of the shoulder and knee. The deltoid and triceps suffered especially. The atrophy showed itself about the beginning of the second week after the articular pain; sometimes there seemed to him more loss of power than atrophy, sometimes the reverse. Similar muscular atrophy was noticed by M. Voltat after traumatic injury of the joints (*Archives Générales*, 1879); in some cases occurring more rapidly, even within twenty-four hours of the injury. This led Dr. Petrone to a series of experiments, consisting in the artificial induction of acute synovitis in animals. He found on post-mortem examination, within ten or twelve days of the experiments, that the muscles in the neighborhood of the inflamed joint had lost ten to thirty per cent. of their weight. The nerves showed nothing abnormal. He does not pretend to determine the method of the influence of the joint-affection on the surrounding muscles, but urges that the effects are too rapid to be explained either by the atrophy of disuse, or by Vulpian's hypothesis ("Leçons sur l'Appareil vasomoteur," vol. ii.) that the irritation of the articular nerve produces an effect on the gray matter of the spinal cord which leads to the muscular atrophy.

Gelsemium in Intermittent Fever.—Dr. McKay, in the St. Louis *Courier of Medicine*, October, 1883, says that he uses gelsemium in chills, with as much confidence as he formerly used bark. If the stomach has been prepared for it by the use of a pill or two, or three, composed of podophyllin and leptandrin, with solid extract of hyoscyamus, one-half or three-fourths of a grain each, one at a time, gelsemium will arrest chills as often as any other remedy. He gives the fluid extract in one-fourth to one-half drop doses once in twenty or thirty minutes, beginning usually three hours or so before the time of the expected chill. This for adults; children much less. If this does not succeed, he does not increase the dose, but lessens it. He usually prepares the medicine for use by putting, say, ten drops into a teacup or tumbler, if for immediate use, and measuring in three or four teaspoonfuls of water to each drop, and giving in teaspoonful doses as stated above. If to be kept for a few days, he puts in camphor or peppermint-water, which helps to keep it sweet; or, where there is much headache, he puts in bromide of potassium, and that helps to keep it. If glycerine is added it will keep indefinitely. The medicine, prepared in this way, will rarely fail to quiet any nervous chill or rigor after it is fairly under way. In such cases he gives it sometimes as often as every five minutes in severe cases, and it has never failed him.

Diphtheritic Nephritis.—According to Professor Fürbringer cases of pure diphtheritic nephritis without passive congestion may be divided into three classes: First, kidneys which appear normal to the naked eye with an anæmic cortex. In these the essential and almost the only histological change is parenchymatous degeneration of the epithelium in the cortical tubules. This is an abortive form, closely allied to the febrile kidney. In the second form the cortex of the kidney appears slightly increased, and is pale and turbid looking on section. The degeneration of the cells in this form is both more intense and more extensive, and extends to the epithelial covering of the glomeruli. Alterations of the interstitial substance are beginning; the medullary tubules are sometimes catarrhal; there are no vascular lesions. The third form is the large yellow kidney, a form that is parallel to the hemorrhagic kidney of scarlet fever. In this form there is extensive fatty degeneration of the parenchyma and well marked alterations of the stroma.—*Virchow's Archiv*, vol. xcii., March, 1883.

Rigors Following Intra-Uterine Irrigation.—Dr. Fasola (*Annali di Ostetricia, Ginecol., e Pediatria*) examines one of the accidents of intra-uterine irrigation in the puerperal state—rigors. This accident is not rare, since it was observed twenty-four times in two hundred in which irrigation was used in the clinic of Turin, in the scholastic year 1881–82. Of these observations he reports eight, those, that is, in which the appearance of the rigor after irrigation was marked and characteristic. He draws the following conclusions: 1. Disinfectant intra-uterine irrigations practised in the puerperal processes of septic endometritis, with offensive lochia, etc., are frequently followed by rigors. 2. The rigor is so much the less intense as the offensiveness of the lochia is less, and the earlier the local treatment is begun; and in these cases it frequently only amounts to a sense of chilliness rather than to a decided rigor. 3. It generally appears after the first irrigations, often after the evening irrigation; it is not always repeated. 4. The rigor is followed by elevation of temperature; but this is of short duration and is followed by a fall, sometimes great in slight cases, when the temperature did not exceed 101.3° F. before the irrigation, not uncommonly to the normal. 5. The rigor and the rise of temperature never gave rise to further alarming symptoms. He attributes the rigor to the accidental absorption of septic materials, favored or promoted by the mechanical action of the irrigation, removal of thrombi, laceration of vessels, etc. He does not consider that it in any way is to be considered as a reason why endo-uterine irrigation should be discontinued.

Meat as a Food.—The value of meat as a food is due in a degree to its heat-producing properties, though in this respect it is surpassed by fatty and amyloid substances. It is as a tissue-building material, and as an excitant of assimilative changes in the tissues, both with regard to itself and to non-nitrogenous foods, that it is most useful. It is stimulant as well as nutritive, and it therefore holds a deservedly high place in the daily dietary. Experiment has shown that three-quarters of a pound of lean meat fairly represents the quantity per diem which, taken with other less nitrogenous matter, suffices to maintain a person of average size and weight in a normal state of health. Some there are who largely exceed this standard, eating freely of meat at every meal,

and living all the time quiet, sedentary lives. Such carnivorous feeders sooner or later pay a penalty by suffering attacks of gout or other disorders of indulgence. But it is equally important to note that many others, especially women, healthy in all points but for their innutrition, are apt to err as far on the other side. Thus one meets with people who consume about a pound of butcher's meat in a week, or not even that. This fact has been fully brought out by Dr. Graily Hewitt, in his address to the Obstetrical Section at the recent meeting of the British Medical Association. He has likewise with much probability assigned this defect of diet as the chief cause of that general "weakness" which is so common among the antecedents of uterine displacement. The experience of many practitioners will confirm his observation. Different causes are at work to produce this kind of underfeeding—too rigid domestic economy, theoretical prejudices, the fastidious disinclination for food which comes of a languid in-door life without sufficient bodily exercise, tight lacing perhaps, and many more. These difficulties are all more or less removable, unless, indeed, where absolute poverty forms the impediment. No effort should be spared to remove them. The advantages derived from a diet containing a fair amount of solid animal food could not be obtained from a purely vegetable or milk regimen without either unnecessarily burdening the digestive system with much surplus material, or, on the other hand, requiring such revolutionary changes as to quantity and quality of food and times of eating as would probably altogether prevent its general adoption, even were that desirable, into household management. In our opinion, such changes are not desirable, as being inadequate to secure their purpose.—*The Lancet*, September 15, 1883.

The Secretion of Bile.—Baldi has made an experimental investigation of this subject (*Lo Sperimentale*), which again shows the singular irregularity of the flow of the bile. This alone suffices to distinguish it from the other digestive secretions. The observations of the author, so far, tend to prove that the liver, as the secretory organ of the bile, must be considered as an emunctory for the waste materials of the different tissues destined to be expelled. This accords with the researches of Schiff, who has shown that the bile poured into the intestine is in part reabsorbed and taken back to the liver by the portal vein, to be again excreted and returned to the intestine. Some observers doubt if the biliary matters absorbed into the blood pass again in the secretion of the liver, thinking it possible that they may serve only to excite increased secretion without passing out again by the liver. Having repeated Schiff's experiment of injecting bile into the stomach and directly into the blood, the author shows that the liver, rather than the kidneys, expels the biliary matters from the blood. When ox-bile was injected into the stomach, the secretion of bile increased enormously, the bile having taken the green color of the ox-bile. The same happened when the bile was injected into the blood direct, while the urine showed no trace of biliary acids by Pettenkofer's test. All the bile was expelled by the liver, and not a trace by the kidneys. Admitting that the biliary acids (the only true specific elements of bile) are the exclusive products of the hepatic cells—and this remains to be directly proved—the fact is nevertheless true that the biliary secretion is distinguished in a characteristic manner from the other digestive fluids, by the irregularity of its flow and by its independence of any decided exciting influence of food or medicine. It presents instead many points of contact with the urinary secretion; both depend essentially on the collective waste of the organism, the liver having an excretory faculty for the biliary materials, just as the kidneys have for the urinary materials.

Renal Operations.—Mr. Lucas, in a recent discussion on the surgical diseases of the kidney and the operations for their relief (*London Medical Record*, October 15, 1883), commenced by saying that the greatest advances in the treatment which had taken place of late years were those made in the indefinite border-land which separates medicine from surgery. It was in this barren and desolate tract that we must look for fresh discoveries. Ovariotomy and the various operations upon the intestines and stomach he put forward as instances of work recently advanced in this territory; but he claimed, as the most remarkable incident of this decade, the sudden light which fell upon the profession in its relation to renal disease and the rapid growth and recognition of renal surgery. The credit of having awakened a new interest in renal disease, and of having, by experiment on the lower animals, made sure of his ground, was due to the late Professor Simon of Heidelberg, who in 1869 successfully performed nephrectomy for the cure of a fistula of the ureter following ovariotomy. Since then, extirpation of the kidney has been performed upward of a hundred times. In concluding his suggestive remarks Mr. Lucas recommended for the lumbar operation a combination of two incisions which he had employed as giving the most room, viz., an oblique incision higher than the colotomy incision, within about half an inch of the last rib and parallel with it, and a vertical incision on the outer margin of the quadratus lumborum, extending from the upper edge of the last rib to the iliac crest. For the transperitoneal operation, Langenbuch's incision external to the rectus muscle is to be preferred to the median incision, as it enables the operator better to reach the kidney through the outer layer of meso-colon. In conclusion, he urged that antiseptic explorations of the kidney through the loin is a simple and not at all a dangerous operation, which may be undertaken without anxiety in any case where calculus is suspected; that it is generally wiser to tap and drain fluid tumors of the kidney before proceeding to remove the diseased organ; that when nephrectomy is decided upon, the extraperitoneal operation through the loin should always be chosen for any tumor which it is possible to withdraw through the limited space at disposal; finally, if this course be adopted the transperitoneal operation will be reserved for large solid tumors and, perhaps, some floating kidneys.

Spastic Spinal Paralysis.—Dr. N. Weiss relates the following cases (*Prager Med. Woch.*, 1883): 1. A man, aged fifty-five, suffered from weakness and stiffness of his lower extremities, the upper limbs remaining unaffected. The only other symptom that he presented was slowness of speech. After death, symmetrical sclerosis of the lateral columns was found. There were also two deposits in the brain—one a cyst of the size of a walnut, on the right side in the posterior part of the corpus striatum, reaching in the corpus dentatum. On the other side a deposit of cell-growth, of the size of a hazel-nut, was found in the corpus striatum. 2. A man, aged thirty-one, having experienced pain and sense of constriction in his limbs, found difficulty in walking. Some weeks afterward, symptoms of pressure on the cord appeared. Caries of the sixth, seventh, and eighth dorsal vertebræ was found after death, with secondary degeneration of the lateral columns of the spinal cord. 3. A man, aged twenty-nine, had only for a short period before his death the symptoms of spastic paralysis. Nerve-stretching had been employed. Death occurred in nine days; on post-mortem examination, multiple cerebro-spinal sclerosis was found.

Glycerine in Skin Diseases.—M. Desguin, of Antwerp, gives glycerine internally in certain forms of skin disease with, it is said, marked success, especially in acne punctata and the furuncular diathesis. He commences with four drachms daily, and gradually increases the dose. He states that the secretion of the cutaneous glands, which is thick and irritating in these diseases, becomes more liquid, and cutaneous irritation is notably lessened. During convalescence from scarlet fever he believes that it facilitates desquamation.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 15, 1883.

LAPAROTOMY FOR HEMORRHAGE IN TUBAL PREGNANCY.

TWENTY years ago, when the late Dr. Stephen Rogers, of this city, wrote his elaborate paper on extra-uterine fœtation, and advised laparotomy for the arrest of hemorrhage occasioned by the rupture of the Fallopian tube, he took a long look ahead. He was so convinced that the operation was a proper one that he condemned, in very decided terms, the surgeon who should hesitate to perform it when the opportunity offered. It was a radical measure, he contended, but under the circumstances perfectly justifiable, as such hemorrhage was sure to result fatally unless a desperate chance was taken. The acknowledged difficulty was in arriving at a correct diagnosis in time to give the patient the benefit of the operation. With the recent advances in abdominal surgery, and the remarkable success which has crowned the bold invasion of the peritoneal cavity, surgeons have accustomed themselves to believe that any operative procedure in that region may be safely undertaken. For this reason, perhaps, more than any other, Dr. Rogers' suggestion grew in importance and commended itself as a measure which might challenge a practical vindication. At least for the past few years operators have held themselves in readiness for their first case, and have so far agreed with the opinion of Dr. Rogers that they have been willing to assume the risks, great as they are. We believe that to Dr. Charles K. Briddon, of this city, belongs the credit of being the first to perform this operation. The patient was a young married woman, twenty-seven years of age, the mother of two children, the youngest three years of age. She had missed one menstrual period, and at the time of the second was seized with a severe colicky pain in the lower portion of the abdomen. This attack passed off, recurring at the end of a week, and being associated with symptoms of internal hemorrhage. Dr. Briddon saw her early in the evening of October 29th, soon after this attack; diagnosticated rupture of the Fallopian tube with hemorrhage, and advised immediate laparotomy. Drs. Thomas and Walker saw the case in consultation, confirmed the diagnosis, and endorsed the operation. The latter was successfully performed by Dr. Briddon, assisted by Drs. Gerster, Walker, and Sharlau, two hours after the rupture had occurred.

The corpulence of the patient made it necessary to make a long incision, reaching from the umbilicus to the pubes. Her collapsed condition rendered this almost a bloodless proceeding. When the peritoneum was exposed, a small incision was first made, which gave exit to a large amount of fluid blood. The incision was then enlarged sufficiently to admit the hand, and at least a pint of blood-clot was scooped out as rapidly as possible. The uterus was then drawn up as far as its connections would permit, and the cause of trouble was at once apparent. Part of an ovum, one inch and a quarter in diameter, was found protruding from a rent in the left Fallopian tube close to its uterine extremity. The broad ligament was lifted as much as possible, and a probe, armed with a double stout plaited-silk ligature, was passed through it as low down as could be done, and the ends were firmly secured above the free border. In these manipulations the ovum was forced from its bed in the oviduct, and was removed entire. The hemorrhage appeared to be entirely controlled, the ligatures were cut short, and the toilet was completed by thorough cleansing of the cavity. The wound was then closed by silver wire sutures. No time was lost in completing the dressing, but the patient was removed at once to bed, surrounded with blankets and hot bottles. Her head was enveloped in a warm woollen shawl, a small hypodermic of morphine was administered, and brandy was used subcutaneously. It was not, however, until after midnight that an occasional flicker could be felt in the pulse at the wrist. Vomiting, which occurred, was treated by frequent sips of hot water. Nutrient and stimulant enemas were used all through the night. On the morning of the 30th her appearance was much improved. She was inclined to talk, was even cheerful, and expressed herself as entirely free from pain; she only complained of the vomiting; but, notwithstanding these favorable signs, her pulse could scarcely be felt, much less counted; at times it could not be distinguished at all. The temperature was 101°, the respiration 36. At 10 A.M. her pulse could be counted, and it was 126; after this it improved for twenty-four hours, averaging 130, the temperature for the same period being 101° to 102°. In spite of the most assiduous stimulation, the circulation could not be maintained; she began to sink on the afternoon of the 31st, and died at 9.30 P.M., forty-seven hours after the operation.

The autopsy showed the abdominal wound agglutinated and adjoining omentum adherent. There was no general peritonitis, but the pelvic cavity contained two ounces of odorless fluid. The uterus was enlarged to double its size. At the junction of the left oviduct with the uterus, and encroaching upon the cornu itself, was an ovoid swelling about one inch in diameter, darker than the surrounding structures, of a mottled, violaceous maroon color. Near the junction of the posterior wall of the duct with this swelling was a ragged opening half an inch in length, and leading into a cavity formed mainly out of that portion of the duct that traverses the uterine wall, so that the specimen might be said to represent the variety known as interstitial, or, more correctly, tubo-interstitial gestation. On incising that portion of the cavity that was developed at the expense of the uterine textures, it was found filled with adherent coagulum. The cavity of the uterus was not lined with decidua, and the uterine opening of the oviduct was im-

pervious. Outside the rent were found the ligatures applied during life, and which had effectually controlled the hemorrhage.

It is much to be regretted that the patient died. The lessons to be learned from this case have, however, many practical bearings. It has been proved that a correct diagnosis can be made promptly and under difficulties; that the operation is not in itself attended with any immediate danger to the patient; that the point of rupture may be reached without difficulty, and that the bleeding parts can be effectively secured. In this case it must be recollected that the patient was in collapse at the time of the operation. She would certainly have had a better chance if the laparotomy could have been performed earlier. But obviously this was impossible in view of the necessity of dividing responsibility and of receiving a proper endorsement for an operation which was a novel and hazardous one. The precedent has, however, been established, and we congratulate Dr. Briddon on his correct diagnosis and on his courage and skill in acting up to his convictions as to what should be done in such a desperate case.

MEDICAL OBSERVATIONS CONCERNING ALASKA AND THE ARCTIC OCEAN.

The report of the cruise of the steamer Corwin to the Northwest Arctic Ocean and the Alaska region, recently issued by the United States Government, affords much valuable and interesting information not only from its rarity, as compared with the receipt of similar reports from other parts of the world, but also from the carefully prepared statistics which it contains relative to the medical condition of that region. For the latter the profession are indebted to the services of Dr. Irving C. Rosse.

Regarding the diseases peculiar to the aboriginal population, in an epidemic which had proven fatal to a large portion of the natives (at Ounalaska), clinical observation showed marked dyspnœa, bronchophony, cough, expectoration, pain, insomnia, and *great depression* both physical and psychical. The latter was found to be most characteristic, so much so that in many instances it seemed impossible to impress the patient with the slightest hope, who had made up his mind to die at the onset of the attack. The disease was, moreover, very rapid in its course, but, considering the gravity of the several phenomena, very little of the fever that usually attends pneumonitis was present; the main symptom calling for relief being marked asthenia, for which quinia and stimulants were given with much benefit. In fact the administration of quinine to these natives seemed to be attended with the most magical effects, not only in this but in other affections, an adynamic character of disease being almost invariably exhibited. In the cases in question, however, it is to be regretted that no necropsy was made, as, differing in its type from any of the various forms under which pneumonitis usually presents itself, possibly some distinctive morbid characteristic might have been shown.

Pulmonary phthisis is also not uncommon, and forms a large percentage of the cases of disease, even among the native Indians. Acute rheumatism and acute pulmonary inflammations, however, are not frequently met with, notwithstanding that these affections might naturally be supposed to prevail in such a climate.

The principal vice which seems to affect these people is an apparently uncontrollable craving for alcoholic drinks; an appetite, moreover, which seems to be a physiological necessity—although the taste is to all appearances an acquired one—there being an "indescribable something" in the Arctic atmosphere that produces what is called the northern craving for drink.

At St. Michael's, the most northern station of the Alaska Company, and almost under the Arctic circle, it appears that no serious epidemics have occurred since 1840, when small-pox was introduced by the Russians. It was found, however, that pulmonary affections and the constitutional effects of syphilis prevailed to an alarming extent. In addition, affections of the alimentary canal are quite common, these being due chiefly to overloading the stomach after a long fast. Here, too, the thirst for rum exercised a dominating influence.

The affections of the eye and its appendages, are quite numerous. Among them several cases of opacity of the lens and of the cornea were noted, and of fatty and pigmental degeneration, together with granular inflammation of the conjunctiva, amblyopia, etc. Total blindness does not appear to prevail to the extent generally supposed, except among the older people (of fifty years and upward), in whom blindness is almost universal. These eye affections are mostly the result of snow-blindness, and are not caused by smoke, as has been erroneously supposed. An impoverished condition of the blood, brought about by bad feeding and the strumous diathesis, probably also bears a predisposing influence. An interesting question, also, in this respect, would seem to be the form of the rods and cones in the retina of the Esquimaux.

Concerning the relation of the Arctic atmosphere to surgery, it is remarked that wounds seem to heal uncommonly well in this region, a fact probably due to the highly ozonized state of the atmosphere and the absence of disease germs and organic dust—a not uninteresting point bearing on the germ theory and antisepsis. This fact is, moreover, noticeable both in man and animals, and even in extensively lacerated wounds, careful approximation of the edges and the application of a retentive bandage is followed by rapid healing unaccompanied by complications. Skin diseases also prevail extensively, which, however, might be anticipated from the condition of the inhabitants, and a few cases of chorea and of cerebro-spinal meningitis are also mentioned.

THE COMMISSIONER OF EDUCATION ON MEDICAL SCHOOLS AND EDUCATION.

The report of the United States Commissioner of Education for the year 1882 has just appeared, and it contains, as usual, a section devoted to medical education. These sections have heretofore been of much value, but we have to confess that the present one is rather behind the times. The labors of the Illinois Health Board have produced a work which is much later in date, and which shows much more fully, in most respects, the status of our educational system. There are, however, some facts in the present report which will be of interest.

The tables given show that in 1881, there were 96

medical colleges of all kinds, with 12,417 students, and that there were 4,019 graduates at the commencements in that year.

The figures for 1882–3 show that there were in that year 119 medical colleges in the United States, having 11,854 matriculates, and graduating 3,979 doctors of medicine. This shows that despite the increase in the number of colleges, there has been a slight decrease in the number of students and graduates.

Attempts have been made by the Commissioner to show the amount of property owned by the various colleges, and the incomes received by them. The figures given are imperfect, especially as regards the latter point. We observe, however, that there is annually a considerable increase in the amounts representing the value of grounds, buildings, and apparatus. Thus in 1879 the total sum for 68 regular medical colleges was $1,872,970; for 1880 (72 colleges), $1,920,170; for 1881 (76 colleges), $2,208,470.

The Commissioner in his remarks upon medical education correctly states that there is evidence of a steady improvement in the schools, as shown by lengthening of the curriculum, and requirements of preliminary education. There are now 16 colleges in the United States requiring attendance upon three courses of lectures before graduation; while 56 colleges recommend and provide for this without requiring it. There are also 71 colleges which exact some evidence of preliminary education before matriculation. Figures do not show, however, how slight this exaction really is.

THE ADVERTISING RIGHTS OF GENERAL PRACTITIONERS AND SPECIALISTS.

The venerable and esteemed editor of the *Journal of the American Medical Association* has made some official utterances upon the subject of medical advertising, to which we beg most earnestly to call the attention of our readers. We cannot but think that our Chicago contemporary is doing a serious injury to the profession by advocating for specialists and doctors generally a license, which it never has been and is not now considered decent to assume. We quote his words, referring to medical advertisements:

"No one is prohibited from *publishing* or *using* a professional card *as freely as he likes*, simply announcing himself as doctor of medicine, and giving his residence and office hours. . . . . If he desires to limit his practice to the treatment of any particular diseases, he can say on his card that 'his practice is limited' to this or that class of diseases."

We regret keenly that statements like the above should go out stamped with the approval of the "highest exponent of the Code of Medical Ethics."

To say that any physician "can publish his professional card as freely as he likes," is to take down all the barriers at once against promiscuous medical advertisement. With such a liberty one could take up half a column in a daily paper and still keep within the pale of the Code. In the large cities of the East, and in most, if not all, of those in the West, reputable physicians do not put their card and office hours in the daily papers, as do the quacks and abortionists. If it, under the sanction of the American Medical Association, became the custom to advertise in this way, we hardly know where the end would be. In small towns it is perhaps well enough to allow the local physicians to insert their cards along with the dentists, carpenters, and tinware men. But in cities where there are daily papers this practice furnishes too great opportunities for abuse. It is wisely looked down upon by those whom we most esteem, and we trust that it will continue to be.

The permission to announce the "practice limited to" will strike sensible people as being silly, if not actually dangerous. Where shall we find the censors to say that a practice is really limited as announced? And how many who read the sign will find therein any different meaning from that of "specialty." To those who know the wiles of human nature, the opportunities here for abuse are most apparent; while the attempt to make a distinction between "practice limited" and "practice special" appears to us to be a foolish quibble.

If we are to take the position that medical men should not advertise, let us maintain it in its integrity.

MEDICINE IN ALLEGHANY COUNTY.

We have published editorially the statements on both sides of the question as to the ethical condition of the Alleghany County Medical Society, and as the subject has not a wide interest, we will dismiss it now and finally with but brief comments. We have perfectly satisfactory evidence of the good standing and good faith of our first correspondent, while that of our second is well known.

It is evident from facts admitted by both parties, that the Alleghany County Medical Society is a reputable organization, but that it has a few very weak members who, if not actual charlatans, are dangerously near the line. As to its prosperity, we are authoritatively informed that since 1870 it has increased in size from 100 to 116 members, and that there are in Alleghany County 1,268 registered practitioners; in Pittsburg alone, 376.

We are forced to believe that some Pittsburg physicians consider it proper to announce their names, and even their specialty, by advertisements in the daily press, and we believe it is true that a number of Pittsburg physicians designate their specialty upon their office signs. Such practices are certainly derogatory to professional dignity, and ought not to be countenanced.

While some bad practices thus undoubtedly exist, we do not wish to say that the Pittsburg physicians are not fully the equal of those of other cities in professional skill and character. Only it is unfortunate that they should allow their general standing to be injured by the practices of a few.

THE STRUGGLES OF A YOUNG DOCTOR.

We have received a letter from a young physician residing in a large interior town, and publish the substance of it elsewhere. His complaint is that the older physicians underbid the younger ones, making visits for fifty cents and furnishing the medicine. These older offenders also trust patients, and continue to treat them, although unpaid accounts have been standing for years. We infer that there are mutual recriminations between the younger and older parties. Our correspondent says that he has

spent eight years in studying medicine—six in college, two in a hospital—yet now, with a fair number of patients, he can "barely scrape along, because if I dun I lose my patients."

Although there may be much justice in our correspondent's complaints, we cannot altogether commend the spirit which his letter shows. The circumstances described are the inevitable result of a crowded profession and weak human nature. But neither these nor any other circumstances justify younger men from abusing the old, because the latter do not act fairly.

Our correspondent does not think that there are too many doctors in his town, but that all could live comfortably if patients would pay decently, and if the older doctors had more self-respect. But behind these incidental causes we can see the working of the law of supply and demand; and the demand is for the patients, not the doctors.

At the same time, it is truly disgraceful and unjust to the profession that members should sell their services for sums less than a good corn-doctor receives.

Let the younger men and the respectable older ones attack this abuse in a manly spirit. They will then obtain sympathy certainly, and perhaps success.

THE REPORT OF THE FRENCH CHOLERA MISSION.

At a meeting of the Société de Biologie, Dr. Straus, of the French Cholera Mission to Egypt, gave some account of the work done by the mission. We have already referred to this briefly. It was found that the rice-like stools consisted of epithelial débris, and that these epithelial cells had undergone the process known as *nécrose de coagulation.*

Micro-organisms were found in vast numbers and variety in the intestines. Among them were bacteria termo and bacilli, some resembling those of tuberculosis, but smaller, others resembling the bacilli of glanders, being the same as were described by Koch. But Dr. Straus did not think these could be the bacilli of cholera, because their presence was not constant, and because they were found in other places than the intestine.

There were discovered also in the blood elongated corpuscles, recalling to mind those of the *rouget*, but much smaller. Attempts to color and cultivate these failed. Attempts to inoculate lower animals with the discharges also failed. In fine, the French Cholera Mission accomplished nothing except to furnish some evidence against the findings of Koch, and to show by the death of one of the members that copper does not prevent cholera.

M. Paul Bert offered to Dr. Straus the consolation that he had at least succeeded in pointing out the error of Koch.

This is no doubt a comfort to the Gallic mind, but unfortunately the scientific world just now feels much more confidence in German than in French methods of mycological investigation.

THE STATE OF OHIO has no Board of Health. It is proposed, therefore, to organize a State Sanitary Society and a movement to this effect has begun.

News of the Week.

A NEW MEDICAL SOCIETY IN NEW YORK has been organized and called The New York Society for Medico-Scientific Investigation. The objects of the Society are, first, the introduction and proving of new drugs; second, the re-proving of drugs of which the pathogenesis is incomplete or inaccurate; third, the collection of data bearing upon disease in general, which would include the investigation of epidemics, their causes, the conditions present, such as atmospheric and climatic, the relation of drugs thereto, the so-called season remedy, the limit of drug attenuation, etc.

THE EXISTENCE OF A MICROCOCCUS OF PNEUMONIA has been confirmed by Professor Carl Friedländer, of Berlin, who has cultivated these organisms and produced croupous pneumonia by inoculating them in dogs and mice.

THE QUEEN'S LOCOMOTION.—It is gratifying to learn from the English medical journals that "the Queen's power of locomotion is considerably ameliorated." It would be interesting to know how she walks with her locomotive powers thus ameliorated, and perhaps some successive instantaneous views might be of interest to her loyal subjects, who appear to be more loyal than grammatical.

DR. J. MARION SIMS is said to have left, ready for publication, a story of Revolutionary times, entitled "Lydia McKay and Colonel Tarleton."

THE SANITARY CONVENTION AT BALTIMORE, held on November 27th and 28th, was a very successful meeting. Papers were read by Dr. J. F. McShane, on "Vital Statistics"; by Colonel G. E. Waring and Mr. C. H. Latrobe, on "Sewage"; by Dr. W. S. Forwood, on "Canning Fever"; by Dr. John Morris, on "The Etiology of Baltimore Catarrh"; by Dr. W. S. Wyman, on "Quarantine"; by Dr. E. J. Henkle, on "The Last Small-pox Epidemic in Baltimore"; and by Dr. R. Gundrey, on "The Conflict of State Power and Individual Rights in Sanitary Matters."

"GOOD ON FITS."—A contributor to our esteemed contemporary the *Mississippi Valley Medical Monthly*, reports that he has treated 765 cases of "fits" and has cured seventy-five per cent. of them. He ought to come East and teach his less fortunate brethren the secret of his skill. We suspect, however, that he has adopted the old plan of throwing all his doubtful cases into fits and then treating them.

TESTING THE CONSTITUTIONALITY OF MEDICAL REGISTRATION LAWS.—A graduate of the Louisville Medical College in the year 1873 recently presented his diploma before the State Medical Examining Board of Minnesota, and demanded a license. This he was refused on account of unprofessional conduct. He has now brought a suit to test the constitutionality of the law.

THE BACILLUS OF YELLOW FEVER has been found, according to Dr. Domingos Freire, Commissioner of the Brazilian Government. It is a cryptococcus and has

been appropriately christened with the name of *c. xanthogenicus*. Dr. Freire states that he has cultivated the organism and has, by a different method from that of Pasteur, obtained what he thinks may be a protective vaccine. His method is founded on the principle of "anti-microbism," that is, the cultivation of organisms antagonistic to those of yellow fever. Some guinea-pigs have been successfully protected by his virus. But it is a long way from the guinea-pig to man.

PROFESSOR LEUBE has been called to Zurich to take the chair of the late Professor Huguénin.

TEMPERANCE AND MUSCULAR EXERTION.—The pedestrian Weston has started out from London on a walking and lecturing tour. He intends to walk fifty miles a day for twenty days, lecturing at the same time upon temperance, and drinking only water. It is difficult to see what this ingenious advertising scheme will prove.

THE RUSSIAN PHYSICIAN, DR. ECK, sent to Egypt to investigate the cholera, says that it was undoubtedly imported from India.

A DEFAMER OF THE PROFESSION.—The *British Medical Journal* and the *Medical Press and Circular* unite in severely blaming Dr. H. Donkin, a physician who wrote an anonymous letter to a London daily paper criticizing Drs. Ringer and Murrell for having, as he said, experimentally used nitrite of sodium in dangerous doses. "Never do we remember," says the *Press and Circular*, "an instance in which cowardly resort to anonymous publication has been resorted to by any one of position in the world of medicine," as was done by Dr. Donkin. This is the person who was so quick to publish in the *Times* a denunciation of the late Dr. Beard for his experiments in hypnotism before the British Medical Association some time ago.

THE NEW YORK STATE BOARD OF HEALTH reports as a result of its investigation into the cause of malaria along the Hudson, that this disease has been brought about, in part at least, by the railroads making embankments which prevent free drainage into the river.

THE POST-GRADUATE MEDICAL SCHOOL has been obliged to enlarge its quarters, and has taken another floor in the building which it occupies. The School has had a very prosperous opening, and begins its second term with about sixty students, all of whom are graduates in medicine.

THE NEW YORK POLYCLINIC has at the present date seventy students in its various classes. These are also all graduates. Certainly post-graduate instruction is becoming popular.

THE CASES OF TYPHOID FEVER AT YALE COLLEGE are said to have been mostly imported. Local physicians say, however, that some of the fevers are due to drinking water from the wells on the campus, these being near drains.

ENLARGEMENT OF ST. VINCENT'S HOSPITAL.—A new wing to the St. Vincent's Hospital, containing thirty-four rooms, besides open wards, was opened this week. The cost has amounted to $150,000. It is intended for pay patients.

A NEW MEDICAL COLLEGE AT WINNIPEG was recently organized, under the name of the Manitoba Medical College.

DR. DUDLEY S. REYNOLDS has resigned the editorship of the *Medical Herald*.

THE GERMAN CHOLERA MISSION has gone to Calcutta, instead of Bombay as at first intended. Better facilities are to be found at the former place. The Mission has been cordially received by the English authorities.

THE LATE DR. J. MARION SIMS.—At a called meeting of the Faculty of the Baltimore Medical College, held on November 27th ultimo, the following preamble and resolutions were offered by Professor Harvey L. Byrd, and adopted unanimously, viz.:

Whereas, We have learned with profound sorrow and deep regret of the death of Dr. James Marion Sims, which sad event occurred in the city of New York on November 13, 1883; and

Whereas, It behooves us as a corporation and as individuals, to bear testimony to his brilliant career and great achievements, which have enriched the profession of medicine so much, especially in the knowledge and skill he applied so successfully for the relief of suffering womankind; be it therefore

Resolved, That we deplore the decree of our Heavenly Father which called from the midst of the living James Marion Sims, and from the profession he so much honored, and thus stilled forever the cunning hand that had wrought relief to so many suffering women in both hemispheres.

Resolved, That these proceedings be spread upon the minutes of this meeting, and that a blank page of the records of this corporation be inscribed with his name and the dates of his birth and death; and that a copy of the foregoing be forwarded to his bereaved family with the assurance of our sincere sympathy and condolence in this their irreparable loss.

Resolved, That the editors of THE MEDICAL RECORD and *Medical Times* be respectfully requested to publish the same.

A MEDICO-LEGAL SOCIETY has been organized in Philadelphia. Professor John J. Reese delivered an address before it at its opening session.

ADULTERATION OF MILK IN LONDON has, according to G. W. Wigner, F.C.S., been reduced to a science. Of three hundred samples obtained in one day from different districts only three per cent. showed no adulteration. The average of all the milk showed nineteen per cent. of added water, and it is estimated that milkmen get $1,330,000 annually by selling water.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.—The next meeting of this Society will be held Friday evening, December 21, 1883, instead of Christmas eve.

ORGANIZATION AND CO-OPERATIVE WORK AMONG STATE BOARD OF HEALTH OFFICERS.—At the last meeting of the American Public Health Association, it was determined to form some kind of organization among State Board of Health officers, for the discussion of matters belonging to their official work. A committee was appointed and it has been arranged to have a meeting

and organize, at Washington, D. C., in May next, during the meeting of the American Medical Association. The scheme thus proposed seems likely to be a most useful one.

A Successful Case of Nephrectomy by the post-peritoneal method was recently performed by Mr. Richard Davy, of London. The patient, a man, aged fifty-three, had a large fibro-cystic left kidney.

The New Jersey Sanitary Association held a meeting in Trenton, December 7th. The subject of school hygiene was especially discussed.

Sensitive Drug Students.—The students of the National College of Pharmacy at Washington, D. C., deserted their school because a colored student was admitted. Harmony was restored by the Faculty promising to admit no more of the offending race.

Drs. A. A. MacDonald and H. E. Hughes, who were accused of falsely certifying that one Mr. Haas was insane, and of thus securing his confinement in an asylum, have been relieved of the charge. The well-known excellent standing of these gentlemen make the charge against them on the face of it absurd and unjust.

The Money-Value of an Arm.—It may be of some interest to surgeons to learn that the money-value of an arm, lost in the Taunton Locomotive Works by Mr. E. H. Rankin, was, in the opinion of a jury, $9,000.

New York Academy of Medicine—Nominations for Officers.—The following candidates were placed in nomination at the stated meeting, December 6th, to be voted on at the first stated meeting in January, 1884: For *Vice-President*, Drs. Robert F. Weir, and Henry D. Noyes; for *Trustee*, Drs. Cornelius R. Agnew and Samuel S. Purple; for *Treasurer of the Board of Trustees*, Drs. Frederick A. Castle and John H. Hinton (to fill vacancy); for *Committee on Admissions*, Drs. Daniel Lewis and Edward H. Janes; for *Committee on Education*, Drs. W. Gill Wylie and John Shrady; for *Committee on Ethics*, Drs. C. Dixon Varley and Francis V. White; for *Committee on Library*, Drs. Abraham Jacobi and Henry D. Nicoll; for *Treasurer of the Academy*, Drs. William F. Cushman and Edward H. Peaslee.

Papers for the Annual Meeting of the State Medical Society.—Dr. Hutchins has again sent out a notice requesting members and delegates to furnish papers for the meeting of the State Medical Society, in February next. We trust that his energetic efforts to secure a successful meeting will find a hearty response. We especially urge the general practitioners throughout the State to send in records of their experience. We do not think there is any doubt that plenty of papers will be forthcoming. It is the practice of medical men to put off writing as long as possible, and Dr. Hutchins's method of working for papers so long in advance is a good one.

Medico-Chirurgical Society of German Physicians of the City of New York.—The following gentlemen have been elected officers of this Society for the ensuing year: *President*, Dr. Felix Nordemann; *Vice-President*, Dr. Otto Heubner; *Secretary*, Dr. George W. Rachel; *Corresponding Secretary*, Dr. C. A. Von Ramdohr.

Reviews and Notices.

Manual of General Medicinal Technology, including Prescription Writing. By Edward Curtis, A.M., M.D., Professor of Materia Medica and Therapeutics, College of Physicians and Surgeons, Medical Department of Columbia College, in the City of New York. New York: William Wood & Co. 1883.

This is one of Wood's series of pocket manuals written by a competent and painstaking teacher in this department of medicine. The lecture style has been retained, and the technicalities of prescription writing have received especial attention. The book is divided into two parts: first, the technology of medicines; second, the technology of medicating. In the first are chapters containing a concise synopsis, together with brief comments, on the naming, the forms, determining the quantities, and prescribing medicines. In the last, the conveniences of the metric system are pointed out, and a comparison made between it and the old system by writing the same prescription according to both methods.

The reviewer notices the following, which seem to be errors. On page 158 the word "tablespoonful" appears for "teaspoonful," and the reverse is seen on page 165, where the word "teaspoonful" is used for "tablespoonful." Again, the approximate metric equivalent for ℥ j. given in the author's table is 30.00 gms., while the approximate metric equivalent given in the example for ℥ jss. is 35.00 gms., and for ℥ ss. 20.00 gms. If these are not errors they will do to other readers just what they have done to the reviewer, give rise to an uncomfortable degree of confusion.

The reader will also notice that the author calculates on the basis of *six* teaspoonfuls for a fluidounce, and *three* tablespoonfuls for *two* fluid ounces. This is worthy of note because it varies considerably from the average quantities heretofore regarded as equivalents.

The book will interest those who wish exact instruction in prescription writing, according to the methods now in use.

Epitome of Skin Diseases, with Formulæ for Students and Practitioners. By the late Tilbury Fox, M.D., F.R.C.P., and by T. Colcott Fox, M.B., M.R.C.P. Third American edition, revised, and with additions by T. Colcott Fox, B.A. (Cantab.), M.B. (Lond.), Physician for Diseases of the Skin to the Westminster Hospital, etc., etc. Philadelphia: Henry C. Lea's Son & Co. 1883.

After the many crude and unscholarly volumes, yclept manuals, with which medical literature teems at present (and which are usually the abortive deliverances of ambitious gentlemen with an unfortunate aptitude for compilation, and which owe whatever popularity they may attain to the specious allurement they offer of a royal road to a lucrative specialty), it is a relief to turn to this little book, which one can distinctly and cordially recommend. It is an admirable condensation of the classical views of Tilbury Fox, developed and elaborated to conform to the more modern ideas of British dermatology. The classification of dermal diseases endorsed by the American Dermatological Association is inserted, a practice which more of our foreign authors would do well to imitate.

The Pathology and Treatment of Venereal Diseases. By Freeman J. Bumstead, M.D., LL.D., and Robert W. Taylor, A.M., M.D. Fifth edition, revised and rewritten, with many additions, by Dr. Taylor. 8vo, pp. 906. Philadelphia: Henry C. Lea's Son & Co. 1883.

It is known to many that for some months before his death the health of Dr. Bumstead was so bad that almost the whole of the labor of preparing the fourth edition of this work for the press devolved upon Dr. Taylor, the

junior member of the firm of authors. That the work was well done is evident from the fact that but four years have elapsed since its appearance, and a fifth edition has already been called for and published.

In the new edition Dr. Taylor has made but few changes in the text, the principal alteration being the substitution of the first personal pronoun for his own name. He has, however, made many additions to it, about seventy pages in all being devoted to them. A mere enumeration of the more important of these will furnish an opportunity of judging how well he has succeeded in keeping the book up to the high position it had attained in the estimation of the medical profession under its original editor. The great merits of the earlier editions were so generally recognized that it would surely be a work of supererogation to point them out here.

Among the additional subjects discussed are: some additional means by which syphilis may be communicated, the possibility of inoculating animals with the disease (to this more than five pages are given), the theory of its nature advocated by Dr. Otis (which the author mentions but to condemn), excision of chancre, chancre of the cervix uteri, the influence of syphilis on the healing of wounds, the use of salicylic acid in palmar syphilides, of chromic acid in lingual affections, a modification of Schede's method of treating wounds as applied to ulcerating gummata, the use of local mercurial fumigations (illustrated by a new plate), congenital syphilis of the throat, the use of coca, the treatment of syphilis by the "chromwasser," so strongly advocated by Güntz, and even the decoction of various herbs recently praised by the late Dr. Marion Sims. Another important addition to the work consists of a chapter devoted to syphilis and marriage.

A careful perusal of all this new matter will undoubtedly convince the reader that in choosing Dr. Taylor as his literary heir and successor, Dr. Bumstead took the best possible step to render it certain that at least one good thing that he did should live after him, and it also warrants the belief that future editions of the work will be worthy of their predecessors. The present edition well sustains the enviable reputation that Dr. Taylor had already earned for himself as an original worker and thinker, a careful observer, a man of positive views, and as the author of a large number of valuable contributions to our knowledge of syphilis and kindred diseases.

Thirteen chromo-lithographic pictures have been added to the present edition. These will prove of great assistance to those who desire to become familiar with the appearances of such lesions, but who lack opportunity of observing them in the living subject.

Regarding the work as a whole it is confidently asserted that no physician or student who wishes to learn how to recognize, or to properly treat, the different venereal diseases, or to have an authority at hand containing the latest and best views on these affections, can afford to neglect to read and keep the latest edition of Bumstead and Taylor.

An Ethical Symposium; being a Series of Papers concerning Medical Ethics and Etiquette from the Liberal Standpoint. By A. C. Post, W. S. Ely, S. O. Vander Poel, L. S. Pilcher, T. Hun, W. C. Wey, J. Ordronaux, D. B. St. J. Roosa, C. R. Agnew, A. Jacobi, and H. R. Hopkins. New York: G. P. Putnam's Sons. 1883.

This little volume is a campaign document, just as Dr. Flint's manual was part and parcel of a great medical canvass. Now that the active contest is as good as over, having resulted in victory for the New Code party, it will not be necessary to do more than glance at the contents of this ethical symposium. It embodies the best arguments clothed in plain English that the advocates of liberalism can advance. And it must be said that they appear in the shape of a formidable phalanx of common sense, honesty of conviction, and fearless prediction of remote consequences. Gauged by the standard of these liberal essays, the Old Code has certainly outlived its period of usefulness, and it was well that it was thrown overboard as useless ballast. The progress of that noble vessel, called medicine, should now be all the quicker.

A Hand-Book of Therapeutics. By Sidney Ringer, M.D., Professor of the Principles and Practice of Medicine in University College. Tenth Edition. New York: W. Wood & Co. 1883.

It is only necessary to chronicle the appearance of a new edition of this well-known hand-book. All other comment is superfluous. The general plan and arrangement of the volume remain unaltered. A concise account of new and important discoveries made in pharmacology and therapeutics since the appearance of the last edition has been incorporated with this the last issue. Ringer's therapeutics will be read with advantage by students, and will be occasionally referred to with benefit by the practitioner.

The Aims of Therapeutics.—At the recent Congress of German Naturalists and Physicians Professor Liebermeister delivered an address upon the aims of modern therapeutics (London *Lancet*). He said that owing to the "epoch-making" discoveries upon the nature of disease which have been made within the last decade, great changes were taking place in treatment which had by no means yet attained their full development. Although theoretically therapeusis is based upon pathology, advances in pathology had not always been followed by a similar advance in therapeutics, and he instanced the fact of the marked transition from the old symptomatological system of medicine to that based upon pathological anatomy which occurred early in the century, as leading to no corresponding change in methods of treatment. But as anatomical study increased and physical diagnosis improved a period of skepticism with regard to the influence of remedies and expectant treatment came into vogue. Regarded by some as a retrogression this was really a great advance in therapeutics. It was not only the liberation from the dogmatism of the schools and systems, but the opening up of a scientific study of the object. Then it came about that the anatomical standpoint yielded to the etiological the recognition of the important part played by micro-organisms in many diseases being the cause of this change. The doctrine of contagium vivum, strenuously disputed twenty years ago, has practically become generally accepted, and prophylaxis is now the first aim in dealing with disease. He pointed out how the pathogenetic organisms may be considered in two great classes—those, namely, which prevail everywhere, and those which require special conditions for their occurrence. In this way he contrasted the poison of pyæmia, septicæmia, osteomyelitis, etc., on the one hand, with those of malaria, cholera, typhus, scarlet fever, and other endemic and epidemic diseases on the other. Measures of prophylaxis were identical with general sanitation and public and personal hygiene. He strongly insisted upon quarantine as protective against the spread of epidemics, and rebuked England for allowing, in the face of the cholera, its mercantile interests to render it blind to the interest of the public welfare of the whole of Europe. When the infective germs have gained entrance into the body, then specific treatment is called for, as quinine in malaria, calomel in typhoid fever, salicylate of soda in rheumatism. Further, there are measures for direct prophylaxis, as in curing a susceptibility to catarrhs, which afford so favorable a soil for the tubercle bacillus. Other methods are symptomatic and alterative; and although therapeusis is still largely empirical, the path along which it must advance has been much cleared by the advance of general medical knowledge, so that there was much to hope for in the future.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 14, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

(Continued from page 635.)

HYPERTROPHY OF THE HEART—CORS BOVINIS—WEIGHT FIFTY-THREE OUNCES—VENESECTION, BLISTERS, AND THE ACTUAL CAUTERY USED WITH BENEFIT FOR THE RELIEF OF SYMPTOMS.

DR. BEVERLEY ROBINSON presented a heart removed from the body of a man thirty-nine years of age, whose stature was very much above the average. His family history was negative. He had been a free drinker of malt liquor and spirits and gave a doubtful history of chancre, occurring seven or eight years ago. He came to St. Luke's Hospital suffering from the ordinary symptoms of chronic valvular disease of the heart, such as dyspnœa, etc., and there was well-marked anasarca. He was treated with all the ordinary cardiac stimulants, but without special benefit. A blister was applied over the precordium and it relieved the dyspnœa very notably. The Paquelin cautery also was applied over the precordium at sixty or seventy points, with the result of giving marked temporary relief from the dyspnœa. At one time eighty ounces of fluid were taken from the right pleural cavity, and forty ounces subsequently. Finally, the jugular vein in the right side being much distended and tense, the patient was bled and *fourteen* ounces taken, and again he was markedly relieved. There was some evidence of pericardial effusion, and a hypodermic needle was introduced, but only half a syringeful of pure blood was obtained.

The case was especially interesting on account of the size of the heart, the temporary relief afforded by venesection, and the absence of serious results following the puncture of the pericardium, although the needle entered the heart-wall.

The following notes of the autopsy were furnished by Dr. F. Ferguson:

The body is fairly nourished; rigor mortis is well marked and there is general anasarca. The peritoneum contains eight ounces of clear serum. The diaphragm on the right side is at the fourth interspace on the left side at the fifth rib. Thorax: There are old loose adhesions binding the right lung to the chest-wall at different points over its entire surface. There are nine ounces of fluid in the right pleural cavity. There are no adhesions or fluid in the left pleural cavity. The pericardium contains three ounces of pus and serum. Heart: The heart is enormously increased in size, it weighs with the pericardium attached three pounds and five ounces. Both the parietal and visceral layers of the pericardium are intensely congested. There are several areas of thickened pericardium on the surface of the heart and there are circumscribed areas of thickening in the walls of the coronary arteries. From the upper portion of the right auricle to the apex of the heart it measures twenty centimetres; and from the attachment of the segments of the aortic valve to the apex it measures fourteen centimetres. The ventricular walls, especially the left, are much hypertrophied. The thickness of the left ventricular wall varies from one to three centimetres, its greatest thickness is at the base of the heart. The ventricles are enormously dilated and distended with recently clotted blood. The mitral valve admits three fingers, and its segments are thicker than normal. There is fusion of two of the cusps of the aortic valve and a rupture between them which admits a cylinder one and a half centimetres in diameter. The edges of this opening are jagged and covered by shreds of fibrin. The cusps of the aortic valve are much thickened. There are extensive areas of endarteritis and patches of atheroma in the aortic wall. Valves in the right side of the heart are normal. The lungs are intensely congested and œdematous. The spleen is normal in size, firm in structure, and deeply pigmented. The kidneys are firm in structure, surfaces slightly granular and lobulated. Markings are wanting, and there is fat in the tubules of both the cortex and pyramids. The stomach is intensely congested, and its mucous membrane is thickened slightly. The mucous membrane of the intestines is congested. The liver is small, stained with bile-pigment, throughout contains much connective tissue and some fat.

Microscopic examination.—The muscular fibre of the heart contains much fat, the transverse striæ are not generally visible. The vessels of the lungs are everywhere distended with blood, and the epithelium lining the air-vesicles is pigmented. The kidneys contain an excess of connective tissue, there is much fat in both the convoluted and straight tubules. There are also granular casts in some of the straight tubules and in some of the tubules of the cortex. The vessels are everywhere distended with blood. The liver contains much fat, in places arranged around the periphery of the lobules, but sometimes around the central vessels. It is stained with bile-pigment. The fibrous tissue is everywhere increased. There are areas of atrophy of hepatic cells around the central vessels and in the intralobular regions.

THE PRESIDENT referred to the fact that Dr. Alonzo Clark had presented to the society a heart that weighed fifty-seven ounces.

DR. ROBINSON also presented specimens which illustrated

THE INTESTINAL LESIONS OF TYPHOID FEVER.

They were removed from the body of John G——, twenty-three years of age, a native of Scotland, and a plasterer by occupation, who entered St. Luke's Hospital October 3, 1883. The notes of the history were furnished by Dr. Samuel T. King, acting senior assistant physician. The patient was admitted suffering apparently from a relapse of the fever which began *six* weeks previously. There was notable tympanites, marked adynamia, and elevated temperature. On October 3d the temperature was 104° F.; on the 4th, 101° F.; on the 5th, 103° F.; on the 7th, 98½°·F.; and on the 8th, 101.5° F. On the evening of the 8th the temperature began to fall, and on the morning of the 10th it was 96.6° F., and during that time there was active delirium, which continued until death, which took place October 14, 1883.

The following is Dr. F. Ferguson's report of the autopsy: The alveolar walls of the lungs are thickened, the vessels are filled with blood, and the epithelium lining the alveoli and loose in their interior contain pigment granules. The epithelium lining the urinary tubules is excessively granular, but there are no casts nor increase in the fibrous tissue of the kidneys. There is pigment in the liver-cells surrounding the central vessels, the organ otherwise is normal. There are numerous irregular ulcers in the intestines with elevated edges and many of them with smooth bottoms. No tubercles were found associated with these ulcers, and microscopically they are surrounded by a zone of hyperæmia, and their edges and bottoms are composed of smooth muscular fibres and numerous small round cells.

There are no giant cells nor the bacilli of tubercle.

Remarks.—At the autopsy it was found that there were two distinct perforations of the small intestine, due to typhoid ulcerations. One of these, which seemed to be of somewhat older date, opened directly into the peritoneal cavity; the other, more recent, opened into a purulent cavity which was shut in, in part by intestinal convolutions, in part by false membranes which united these convolutions together. A moderate amount of purulent fluid was found in the peritoneal cavity, but it was doubtful whether or not this effusion took place before death, or was occasioned by rupture of the wall of the abscess during the autopsy, and at the time when the

contents of the abdominal cavity were examined. It will be noticed that on the evening of October 8th, the temperature fell rapidly from 101.4° until the morning of October 10th, when it marked only 90.6°.

During life it was not determined what the sudden and great fall of temperature could fairly be attributed to. The patient had excessive tympanites and had become delirous, and remained so until his death. In view of the fact that the patient was suffering probably from a relapse of typhoid fever, that a pneumonia of the left apex had shown itself a few days before, and that subcrepitant râles were found all over the lungs posteriorly, a condition of acute phthisis was strongly suspected. It now would appear, inasmuch as the lungs and other organs contained no tubercles, that the patient's temperature curve and general bad condition before death was brought about by the purulent formation in and around a portion of the intestine, as well as by the perforations themselves.

PERICARDITIS—CARDIAC HYPERTROPHY—CHRONIC DIFFUSE NEPHRITIS.

Dr. F. Ferguson presented specimens illustrating the above lesions, removed from the body of a man, aged twenty-five, single, a native of the United States, and a cigar-maker by occupation, who was admitted into New York Hospital on March 25, 1883.

There was no rheumatism or nephritis in his family, but he had himself suffered from rheumatism two years before his admission into the hospital. He was for a long time a steady drinker of beer and whiskey, but considered himself quite well, although not of robust physique, up to three months before his admission into the hospital, when he began to suffer from frontal headaches, dyspnœa, œdema of the feet and ankles, and cardiac palpitation on exertion. He also complained of disturbance of vision, slight pain in the lumbar region, nausea and vomiting.

On admission he was well nourished, there was no œdema, the post-cervical and inguinal glands were slightly enlarged. His heart was normal in position, there was a loud systolic bruit heard at the left nipple and over the base on both sides of the sternum, also in the left infra-spinous fossa. Respiration was intense, and blowing in character, and there were coarse râles heard over both lungs. His temperature was 99°, respiration 30, and his pulse 100 per minute.

He was given diuretics and appropriate diet, and his headaches disappeared and his condition in every respect improved markedly until April 16th, when his headache returned; he complained of anorexia, and suffered from a general sense of depression. At this time, as ever since his admission, he passed from fifty to sixty ounces of urine every twenty-four hours. Urine contained considerable albumen, small amount of blood and pus, also hyaline and granular casts.

On April 23d, and up to May 1st, he complained of a sense of oppression over the front of the chest, dyspnœa, and at times orthopnœa. At this time he was passing less urine, thirty-five to forty-two ounces a day, with a specific gravity of 1.014, and presenting the same chemical and microscopical character noted above. Examination of the heart at this time did not indicate any lesion of the pericardium. His symptoms continued—headache, dyspnœa, pericardial pain, and a sense of oppression over the anterior part of the chest.

On May 6th physical examination revealed an area of flatness one and one-half inch to the left of the apex beat, which was in its normal location. The area of flatness continued to increase, and on May 15th systolic roughening was appreciable over the entire precordial area. On the 18th there was a distinct pericardial friction murmur with the maximum of intensity at the apex. All the above symptoms were constantly becoming more aggravated; physical examination from time to time detected the presence and increase of fluid in both pleural cavities. His respiration was irregular, superficial, and labored. He suffered much from nausea and vomiting. The quantity of urine diminished to twelve ounces in twenty-four hours. During the night of May 26th he was delirious, his heart-action was very feeble, sixty to eighty beats per minute, his respiration eighteen to twenty-eight per minute, and temperature not at any time higher than 99°. He died on the following day.

At the autopsy the body was found emaciated. The peritoneum was normal. The pericardium contained 60 c.c. of bloody serum. Both layers of the pericardium were covered by recent fibrin, and the pericardium beneath the exudata was intensely congested and hemorrhagic in places. The left ventricular wall is much hypertrophied and the ventricle considerably dilated; the valves are competent. The sarcous elements of the cardiac cells are largely degenerated into fat. The lungs presented the condition of brown induration. The kidneys were firm, surfaces slightly granular; markings were obscure. They contain excess of connective tissue, and the epithelium of the tubules was very generally converted into fat. The mucous membrane of the stomach was intensely congested. The mucous membrane of the intestines was also congested. The liver was small; there was increase in its fibrous tissue; it was throughout deeply pigmented.

Dr. Henry J. Garrigues presented specimens illustrating

DISSECTING METRITIS.

In the last year I presented specimens from four cases of dissecting metritis (Medical Record, vol. xxii., p. 413, and vol. xxiii., p. 215). Later I described the disease more at length in an article in the *Archives of Medicine* (April, 1883), adding two new cases. I present here the specimens from these two cases, besides two others from cases not yet published, which form my seventh and eighth cases.

Case VII.—Jane K——, aged twenty-eight, Irish, tripara, was delivered in Maternity Hospital on March 3, 1883. The head was extracted by means of the forceps in left occipito-posterior position of the vertex.

The following days there was a somewhat increased temperature (101° to 102.5°). The lochia at the same time being fetid, an intra-uterine injection of two per cent. carbolized water was given, besides vaginal injections, quinine, and salicylate of soda.

On the fifth day (March 8th) the fundus was yet only one and a half inch below the umbilicus, and a little tender. Tenderness was likewise found on deep pressure in the right iliac fossa. She had no pain, and the temperature was normal. She was very anæmic and had a poor appetite. The lochia were fetid. At the posterior commissure and involving a slight laceration of the peritoneum were found several diphtheritic ulcers. The vagina was clean, but of a dull reddish color. On the anterior lip of the cervix was seen a small, suspicious spot. All these spots were cauterized with a fifty per cent. solution of chloride of zinc, and the uterus washed out with two per cent. carbolized water.

The next day (March, 9th) the patient was delirious. The uterus was washed out with a concentrated solution of boracic acid. An ice-bag was applied over the uterus and groin, and the patient was given ergot, quinine, and brandy.

The condition remained about the same until the nineteenth day after confinement when a body was seen protruding through the vulva. By means of a speculum it was seen to pass through the cervical canal, whence it was easily removed with a pair of dressing-forceps. It was oval and measured seven centimetres in length by two in width. Like similar specimens it showed many sinuses with thrombi, and microscopical examination revealed that it was composed of smooth muscular fibres interspersed with inflammatory elements. The highest temperature reached 102.5° F. (March, 7th). Mostly it was normal in the morning, with a slight rise in the

evening. The pulse varied between 80 and 102. After the expulsion of the muscular mass the patient made a rapid and complete recovery.

CASE VIII.—Bessie R——, aged twenty-three, Russian, primipara, was delivered in Maternity Hospital on September 15, 1883. Normal labor. Slight rupture of the perineum which was touched with tincture of iodine. The next day the fundus was somewhat tender, the lochial discharge not very free and somewhat fetid. On the vaginal wall was seen a diphtheritic ulceration extending from the perineum one inch backward, which was dressed with Peru balsam and iodoform four times a day. The vagina was syringed as often with one and a half per cent carbolized water.

The next day (September 17th) she complained of great pain in the abdomen. The lochia were profuse and fetid, the uterus very tender on pressure, and the temperature rose to 103.6°. Ordered flaxseed-meal poultice and salicylate of soda.

On September 20th the fundus was three and a half inches above the symphysis; pulse, 96, feeble; extremities cold. She vomited.

Five days later (September 25th) the fundus was yet three inches above the symphysis, and tender.

Ten days later (October 5th), the patient was still weak and downcast. The fundus was still three inches above the symphysis and a little sensitive on pressure. The lochia were no longer fetid; ice-bag.

On October 16th she sat up for the first time.

On October 20th, the twenty-sixth day after confinement, she passed, without any pain, more blood from her vagina, and a pear-shaped body, measuring 7.3 by 4 centimetres, exactly representing a cast of the uterine cavity. With exception of the part corresponding to the fundus, there ran a line of demarcation lengthways between the two halves, which, by slight pulling, were easily separated, showing that the specimen had been doubled up in the interior of the womb. It presented an appearance similar to the other specimens. The outer surface was gray, but the interior of the mass had the color of flesh. Everywhere were seen sinuses with thrombi. Microscopical examination showed that the whole mass was composed of uterine muscular tissue, the single fibres being in many places very large, as always in pregnancy, undergoing fatty degeneration, and interspersed with heaps of small round cells and sinuses filled with fibrin.

When I presented the first specimens a distinguished member said that in the last volume of the "Transactions of the Edinburgh Obstetrical Society," a series of such cases were reported, but neither he nor I, myself, have been able to find the article in question, and there was therefore probably some mistake about it. So far as I know, the disease has not yet been described as a feature of the puerperal state except by myself. All I have found in the literature about it are the two cases of the Russian physician, Siromjatnikow (Centralblatt für Gynäkologie, 1881, vol. v., p. 276), who tried to bring the disease in relation to a very problematic typhoid fever and to syphilis. But both his patients were puerperal, and the same was the case with all my eight cases and that of Dr. Kucher. In four of my cases there was diphtheritic inflammation of the vagina or cervix, and I feel much inclined to think that in the others a similar process went on unseen in the interior of the womb. This view is substantiated by an autopsy published in my article above referred to, in which there were no diphtheritic patches visible during life, but after death they were found in the interior of the womb, connected with a diphtheritic infiltration, which formed a layer extending out toward the subperitoneal part of the wall, by the melting of which a considerable part of the muscular tissue of the womb would have been cast off, exactly like the specimens I have presented.

The disease is at all events, as proved by the microscopial examination, an inflammation of the muscular tissue, and must therefore be called metritis. It differs from *gangrene* or *putrescence of the uterus*, in which the destruction simply extends from the inner surface more or less deeply into the muscular tissue. It differs likewise from *endometritis desiccans* or *exfoliativa*, three cases of which are described by the Russian physician, Kubassow, in the last number of *Zeitschrift für Geburtshülfe und Gynäkologie*. In the latter disease it is the whole mucous membrane which is thrown off, in the shape of a sack, to the outer surface of which is attached in some places a very thin layer of the adjacent muscular tissue. The figures show that it is much thinner than the mucous membrane, and in one of the cases the author states that it measured only one-fourth of a millimetre. Two of his cases occurred in virgins and the third in a not pregnant married woman. Dissecting metritis, on the other hand, has so far only been observed as a puerperal disease.

DR. J. LEWIS SMITH presented specimens illustrating

MEASLES COMPLICATED BY CAPILLARY BRONCHITIS,

after which the Society went into executive session.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 6, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. T. GAILLARD THOMAS read a paper (see p. 646) on

THE PREVENTION AND TREATMENT OF PUERPERAL FEVER.

The paper being open for discussion, DR. W. M. POLK believed he echoed the voice of every Fellow when he said that we are deeply indebted to Dr. Thomas for the able and even eloquent presentation of this most important subject, and most of his views were too well recognized, and too generally accepted to require more than commendation on his part. Dr. Thomas had entered upon the subject so thoroughly that there was but little left to say, especially with reference to treatment. With regard, however, to the question of pathology, Dr. Polk thought that perhaps it would have been better, in view of the stress which the author of the paper laid upon antiseptic treatment, if he had planted himself squarely upon that pathological view which regards puerperal fever as identical with septicæmia and pyæmia. So long as there is any question on this part of the subject, it seemed to him that some doubt would still exist in the minds of many concerning the propriety of most of the remedial measures advocated by Dr. Thomas. So far as he was concerned, Dr. Polk was free to say that he considered the disease as identical with surgical septicæmia and pyæmia, and that the variations which exist in the clinical history or in the pathological lesions are simply those which are peculiar to the organs invaded. With regard to the view that there must be a special puerperal fever poison, or a multiplicity of poisons upon which the disease depends, Dr. Polk thought, if it were taken into consideration that a woman recently delivered had within her pelvis a large amount of rapidly retrograding material; that a large number of uterine and vaginal arteries, veins, and lymphatics were dilated and in places collapsed, giving areas of sluggish circulation; that the blood of such people, besides being deficient in red corpuscles (the oxidizing element) and containing an excess of fibrin, was so filled with waste material that its vital and chemical forces were often taxed to the utmost—then one could readily understand how an amount of septic poison, which in any other condition would be inoperative, would here be all-sufficient.

As to the question of treatment, standing as he did upon this basis of septicæmia and pyæmia, it seemed to him the principles of Listerism, as laid down by Mr. Lister and his followers, and advocated by Dr. Thomas,

entirely covered the ground. With regard to precautionary measures, there was absolutely nothing to be added. He would simply suggest, especially with reference to this city, that the question of purity of air is one which should be especially inquired into. Concerning measures of actual treatment, he had but a single suggestion to make, and it was this, that according to his experience intra-uterine injections had oftentimes been used when in reality the sole lesion which was killing the patient existed in the cervix. The stream of water, as it ordinarily flows from the interior of the uterus, is in many instances of insufficient weight to separate the closely applied surfaces, which are frequently in a sloughing condition. His rule, then, had been to thoroughly inspect, by means of Sims' speculum the entire vaginal canal as far as the external os, and then draw down the cervix with the tenaculum and separate its edges, and if he found that there was anything demanding attention, he applied directly to the spot a strong solution of carbolic acid, or some other similar strong disinfectant. In fact, in many cases it had been the only treatment which he had found necessary.

With regard to the interior of the uterus, if he did not find the vagina or cervix in conditions which seemed to be responsible for the disturbance, it had been a practice advocated to introduce borated cotton upon an ordinary applicator, wet in a strong solution of carbolic acid (two per cent.), into the interior of the uterus, and thoroughly wipe it out. He had introduced the broad curette (Skene's), when he suspected remaining portions of placenta or membranes, and removed whatever material might be found there. Of course his remarks were not at all at variance with the general principles advocated, but were simply items of personal experience concerning the details in carrying them out; but he believed that if we are to adopt the measures which have been so properly advocated by Dr. Thomas, we must go a little farther than the author of the paper had done and plant ourselves upon the ground that we have to do with a condition of things which differs in no essential respect from surgical septicæmia and pyæmia.

Dr. James B. Hunter said that while Dr. Thomas had left but little to say, there were two or three points which he thought worthy of attention concerning the details of carrying out the method of treatment, and on which he should differ somewhat with the author of the paper. He had firm convictions with regard to the propriety of washing out the uterus, and was well aware of the great difficulty of accomplishing it thoroughly. He did not believe that *any nurse* should be trusted to administer the intra-uterine injections.

In the next place, it was important to disturb the patient as little as possible, and he thought this could be accomplished without moving the patient at all, if a bed-pan of large size is used, and the patient permitted to lie upon her back. He did not approve of the use of the Chamberlain tube of the size which had been exhibited, but preferred one of about half the calibre and half the length, and he had found it necessary to have the openings confined chiefly to the end of the tube. He had found that, after a few injections had been administered, the uterus contracts, so that it is difficult to pass a tube of large size into it. He then resorted to a smaller tube, and liked the silver tube of Dr. Lyman, or, what he had frequently used with more satisfaction, was Knott's double catheter. He had in some cases had occasion to dilate the canal before using the tube.

A point of special importance is regularity in carrying out this plan of treatment—thoroughness and gentleness without disturbance to the patient.

With regard to the effect produced by the injections, he had found, very commonly, fear of shock and other bad results, but he did not think these had at all been realized. Where the water had been used sufficiently warm, that is 100° F. to 110° F., the danger of chill was reduced to a minimum.

Again, when the water returns clear one is very apt to think he has made a mistake, but according to Dr. Hunter's experience, even though the water does come away clear, the temperature falls, showing the beneficial effects of the treatment. He had resorted to this method as late as the seventh week after parturition.

With regard to the use of the coil, he did not regard it as proper in simple puerperal septicæmia. In puerperal peritonitis he had the strongest possible confidence in it. He preferred the metal or Leiter's coil to the rubber coil, because he regarded it as more manageable, and as more easily kept clean.

Dr. E. L. Partridge spoke with reference to a few practical points in the method of treatment. Concerning the pathology of the disease, he thought there could not be any essential difference in the minds of those who had had experience in the management of obstetrical cases. With regard to prophylactic treatment, he would impress the importance of personal cleanliness on the part of the medical attendant as strongly as Dr. Polk had spoken of the importance of the purity of the atmosphere. It is absolutely essential that the medical attendant observe the utmost strictness with regard to cleanliness, keeping the nails clean, etc., and as a prophylactic measure.

With regard to the management of the case after the disease is established, he was in favor of the use of intra-uterine injections, and would resort to them with the same frequency recommended. Concerning the agent employed, he had only to add that about one year ago the late Dr. Beverley Livingston introduced into the practice at the Nursery and Child's Hospital what Dr. Partridge believed to be a most excellent supplement to the intra-uterine treatment, namely, after cleansing the intra-uterine cavity, he used a mixture of iodoform and glycerine in the proportion of 1 to 10, and injected one, two, or three ounces into the uterine cavity after finishing with the uterine douche. Dr. Partridge regarded it as an excellent adjuvant, both in hospital and in private practice, and thought it possible that a certain amount of intra-uterine injection might be dispensed with by adopting this measure. With reference to the bichloride solution, he could declare himself in favor of its use. With regard to the coil, he believed in it for the reduction of temperature, and thought it the most efficient agent we have in our possession. He also thought we should not look for immediate and marked results from the plan of treatment, as Dr. Thomas had already stated. Again, absence of peritonitis is not a good reason why the agent should not be used. There is no area of the body where applications give the same results as when made over the abdomen. He favored, contrary to the opinion of Dr. Hunter, the rubber rather than the metal coil, and for precisely the same reason given by Dr. Hunter, namely, that it is more easily kept clean. In hospital practice he had not found any objections to its use arising ftom the patient *herself*, as to the liability to produce chilliness, etc., and he doubted if it produced any more discomfort than did the ordinary rectal injection administered for the first time.

The President said the subject was a most important one, and, owing to the lateness of the hour, several gentlemen of large experience and competent to discuss the question were unable to have an opportunity to speak, and he therefore would suggest a proposition. Several years ago he himself advocated views with which not a single one present was in accord, and he had the pleasure and honor of presenting them to the London Obstetrical Society. But he thought that, at the present time, a very large number of prominent obstetricians in different parts of the world were in full accord with what he at that time expressed. The author of the paper of the evening did not consider it worth while to make allusion to these views, and inasmuch as he thought that opportunity should be given to have all views upon this important subject brought forward, and receive full discussion, he would propose that the subject of the paper be

made the topic of discussion at some future meeting of the Academy. With regard to the pathology of the affection, he should hold views which were at variance with those expressed by Dr. Thomas. He should accept in every particular the views expressed by the author of the paper so far as the description of septicæmia is concerned as it exists in the puerperal state, but he should differ with those stated concerning the sum total of the affection; that is, the various local inflammations which occur in the puerperal condition. So also with regard to several points in the treatment of these different conditions. He therefore suggested that the evening of the first meeting of the Academy in February be devoted to the discussion of this subject, and if it would not be regarded as improper he would ask the Academy that he be permitted to open the discussion.

On motion, the suggestion of the President was adopted.

Dr. E. C. Harwood introduced a resolution, which was adopted, calling upon the delegates from the Academy of Medicine to the American Medical Association at its last meeting, held in the city of Cleveland, to report at the next regular meeting.

The Academy then adjourned.

Correspondence.

KAIRINE IN TYPHOID FEVER AND ALBUMINURIA IN INTESTINAL HEMORRHAGE.

To the Editor of The Medical Record.

Sir: In the recent discussion on typhoid fever at the Academy of Medicine I alluded to the value of kairine in controlling the temperature of typhoid fever, and to the appearance of albumen in the urine when intestinal hemorrhage occurred. I have been requested to give more in detail my experience with kairine, and likewise my authority for the statement as to the appearance of albumen in the urine after intestinal hemorrhage.

There are three varieties of kairine in the market, namely, kairine M. (or methylic), and kairine E. (ethylic), and kairoline E. (ethylic), (W. Filehne, *Berlin. Klin. Woch.*, No. 6, 1883). Kairine M. is given in doses of 7.5 to 15 grains. The temperature is rapidly lowered, and rises very rapidly. The effect of the administration of 15 grains of kairine M. passes off in about three hours. Profuse sweats appear on the beginning, and cease with the action of the remedy. The temperature then rises rapidly.

The effects of kairne E. (kairoline E. is said to act in the same way) are said by Filehne to persist for some six hours when administered in doses of 20 to 30 grains. Sweats occur as with kairine M. At the end of the six hours the temperature gradually rises. Filehne made many trials in acute and chronic febrile troubles and obtained always the same results.

He advises the use of kairine E., since the administration of it is more easily managed and the effects more lasting. He prescribes it in the following manner: The first day of any disease when antipyretics appear indicated, the temperature should be taken every two hours, and when it is decided to administer the remedy, 7½ grains are given every hour until four doses have been taken; or, more exactly, this amount is administered until the temperature falls to 100.4° F. This result obtained, he gives from hour to hour only 3½ grains, but as soon as the temperature begins to rise, or the patient complains of a chilly sensation, he resumes the administration of 7½ grain doses. If hourly doses of 7½ grains do not lower the temperature, the amount given hourly is increased to 10 or 15 grains until the temperature is lowered to 100.4° F.

I had not read the communication of Filehne when I first made use of kairine, and I was not then aware that there were several varieties of kairine. The method of administration that I adopted was to begin with 7 grains of kairine, and have the temperature taken every hour. Unless the temperature was above 102° F. I did not regard the remedy indicated, but when the temperature was above this point I had the remedy administered and the temperature taken hourly. If after the first dose the temperature began to fall, say ½° to 1° in the hour, I continued the drug in doses of 3½ grains every hour or half hour, and as soon as the temperature had fallen to 101° F. I discontinued the medicine, and directed that the temperature be taken every hour or two, and that on the slightest indication of a rise of temperature that 3½ or 7 grains be administered at once, and repeated as often as necessary.

I do not believe it wise to reduce the temperature below 101°, since, if the temperature is quickly reduced to a lower point it is more apt to rise rapidly, and if not, you may have some of the signs of collapse appearing—cold extremities, failing heart action, cyanosis, etc.

Moreover, if the temperature has been brought down to 101° the amount of tissue destruction will not be very great at that degree, and cardiac paralysis will certainly not be likely to occur.

Considerable attention has been given to the occurrence of chills during the administration of kairine, and this has been regarded as a very great objection to the use of the remedy, and indeed the chills have been regarded by some as having been induced by the drug. Bear in mind that there are two kinds of chills—one, well called a "nervous chill," which is often observed in hysteria, spinal irritation, and which is also observed in a certain form of epilepsy, but in these chills there is no rise of temperature, or no rise of over 100° F. The second variety, which *always*, I may say, accompanies the rapid rise of temperature. Given any disease in which the temperature rises above 102° F. in a few minutes or an hour, and you almost invariably find that a chill has occurred, and if closely watched it will be observed that the rise of temperature to a certain extent has preceded the chill—has been present throughout the cold stage. The peripheral temperature may be low, but the oral, rectal, urethral, and vaginal temperature will always be found high. The axillary temperature cannot be depended upon. The occurrence of a chill in any fever, as typhoid fever, treated by kairine, will always be found as succeeding and accompanying a rise of temperature. If a close watch be maintained as to the exact degree of temperature of the body, the early administration of kairine will prevent the occurrence of a chill.

The kairine which I have used has been the kairine E., and I am not aware that kairine M. can be found in this city.

It seems to me, however, that it is very important that the profession should know which form of kairine they are using, and be sure that the preparation is a good and pure one. I have come to look upon kairine as one of the most valuable antipyreties that we possess, and I trust that its use will be greatly extended.

I have transgressed much upon your space, and shall advert briefly to the appearance of albumen in the urine on the occurrence of intestinal hemorrhage in typhoid fever.

I remember having my attention directed to this matter some years ago, when in the hospital, I think. During the discussion of Dr. Delafield's paper, I asked how soon after intestinal hemorrhage albumen appeared in the urine, hoping to hear something on the subject from those present, but I did not succeed. Since then I have searched for some account of it, but have only the testimony of some three physicians as to its occurrence.

Very truly yours, T. A. McBride, M.D.

47 East Twenty-fifth Street.

Measles in Washington Schools.—Several schools in Washington have been closed on account of the prevalence of measles.

THE CHANCES OF THE YOUNG PRACTITIONER AND THE ADVICE GRATIS SYSTEM.

To the Editor of The Medical Record.

Sir: Will you kindly allow one of the younger members of the profession—who can, however, lay claim to the title of practitioner only by a species of *lux a non lucendo* courtesy—to extend to you his hearty thanks and congratulations upon the manly stand taken by your journal in the recent editorial upon the "Advice gratis system" and its *mélange* of abuses. We have all heard of the Irishman who endeavored to impress upon a credulous and somewhat myopic horse, through the medium of colored glasses, that a meal of shavings was as satisfactory as one of oats, with the usual result—"the operation was successful, but the patient died."

The experience of the past few years of my life has evolved in me a most sympathetic and kindly feeling toward that horse. You will hence, I feel sure, pardon any "Green grow the glasses o'er me" expressions, or *morituri salutamus* symptoms which may be apparent in what I have to say.

The correspondent in your last issue (whose signature as one of the young practitioners, let us hope, is not so much a figure of speech as it would be in my own case) states very forcibly the truth, that any ameliorative action must come from the younger members of the profession. I think he will agree with me that any such action must be universal and constant, as well as decided, to accomplish any result. I also think he will agree with me that it would be bravado, and not intrepidity, in any one to hope or attempt to constitute himself a leader by *merely* resigning any position which he may believe helps to bolster up this crying outrage, or, indeed, by any spasmodic outburst of well-meaning but necessarily ineffectual enthusiasm. This would doubtless receive from the dignified Bumbles of the profession the same measure of success that greeted poor Oliver Twist's plaintive request, "Please, sir, I want some more." Though we may be the exact analogues of the pitiable "workus" lad, though we may be "desperate with hunger and reckless with misery," we shall certainly get no "more" by the "commission of such an impious and profane offence."

Plainly, all reform in this direction must be gradual, and—we may as well recognize it—slow. What we must all work for is to make it sure. The unfortunate phase of the subject is that the contest which thinking men admit is inevitable is not be decided by one blow, or even one united effort, but by a persistent, continuous, conscientious struggle; and, what is hardest to accept philosophically, is that the benefits will accrue to those who follow us, and not to ourselves.

The evils of our present charity system are easily traced to the naturally fierce competition in an overcrowded profession, and to our national anxiety to obtain a short cut to fame and fortune. The solution of the whole difficulty is merely to put down the brakes on each. If we can do that, we can do all. The task is hard, but not impossible. The present agitation about State examining boards is a hopeful sign. The mills of diplomas, like the mills of the gods, must be made to "grind slowly and grind exceeding small." It is worse than a farce, it is a disgrace, that, because it is considered the best and most ethical advertisement for a man to be a professor in a medical college, that medical colleges must exist to advertise the professors. Policlinics, polyclinics, post-graduate and practitioners' schools, sprout up in profusion to give the finishing touches to the crude material the colleges claim to have educated, and I suppose ere long there will be post-polyclinics, with a corps of professors and a large clinical *clientèle*. Now colleges mean clinics, dispensaries mean clinics; these obliging schools which will make over the aged practitioner as good as new mean clinics, and—here's the rub—clinics mean material, and material means money from the pocket of the young doctor.

In one of Elia's most piquant essays, the human species is divided into "those who borrow and those who lend." Now it would not require an extraordinary knowledge of algebra for one to go the imaginative *littérateur* one better, and calculate, from the present rate of production, the exact date at which the population of the world will consist of equal parts of medical profession and clinical material—each doctor enthusiastically holding his individual clinic upon his own individual patient, while those lucky individuals who preside over a twin confinement, appoint the mother janitor, to open a medical college.

I have already transgressed too freely upon your valuable space; I should like, however, to offer one more suggestion, which is simply this: That it is not alone in the indiscriminate gratuitous treatment of patients that our charities are at fault, but likewise, and perhaps equally, in the gratuitous treatment of the physicians who do the drudgery part of the work. No doctor, no dispensary, no hospital, has any more right to expect (what we tacitly allow them to claim) gratuitous services from a legally qualified practitioner of medicine, than they have from a member of any other calling. It is "whipping the devil around the stump" in the most barefaced manner to pretend in an unctuous and owl-like manner, "That these gentlemen who compose our hospital house-staffs and clinical *corps* get an adequate return in training and experience; it is really a part of their education." Granting that it is, the colleges are at fault. But look at the other professions: when their members are licensed, they claim a fee for their services and get it. The young theologue gets his hand in as chaplain at a hospital, the young lawyer draws up the papers for a damage suit in the wards. They get valuable experience, and what is more, they get paid for their crude efforts. The attending doctor even gets a fat fee from a private hospital patient, while the interne, who has the immediate personal care, responsibility, and the larger part of the treatment, gets—rarely, a "Thank you."

The Medical Record has started a good work, and may God speed it. Young men are beginning to think for themselves, if the fact that they are almost unanimously opposed to any and all codes has any significance. They respectfully, but firmly, decline to impale themselves upon either horn of the dilemma so assiduously proferred them. All they want is a "fair field and no favor." Let The Medical Record stand by and see fair play.

M. D.

FAILURE OF THE HOT-WATER DOUCHE IN THE TREATMENT OF A CASE OF POST-PARTUM HEMORRHAGE.

To the Editor of The Medical Record.

Sir: The use of hot water as a hæmostatic, especially in hemorrhage after parturition, is coming to be pretty generally recognized by the profession. Many of its advocates, however, appear to me to regard it as infallible in its effects, and not without some justification if one were to judge from the number of successes recorded. But I am not sure that cases of failure are as industriously brought to the knowledge of the profession as frequently as they occur, and therefore I hope you will consider the following history of sufficient interest to lay before your readers:

Mrs. K——, aged twenty-nine; primipara. Has always enjoyed excellent health and is of good constitution. Was delivered of twins at 7 A.M. July 14, 1883, after a labor of four hours. Gave 3 jss. of ergot (fl. ext.), which was followed by expulsion of placenta in fifteen minutes and firm contraction of uterus. I was suddenly summoned at 1 P.M. and found slight amount of blood flowing from vaginal orifice; removed binder immediately and found uterus enlarged to nearly midway between umbilicus and ensiform cartilage. Gave ergot by mouth and hypodermically, cleaned the uterine cavity of clots,

and performed pressure over fundus with little effect. Then water as hot as could be borne was injected in large quantity, which was followed by good contraction, but in short time relaxation took place. The douche was again tried and followed by contraction and relaxation as before. Becoming exhausted by my efforts at douching and pressure on fundus, I sent for assistance. Hot water was now used a third time, but with no better result than on the two previous occasions, notwithstanding the constant and powerful pressure of Dr. Martin Burke, who assisted me. About three ounces of tincture of iodine were now thrown into uterus, with the same result as followed the use of hot water. We finally had recourse to electricity, with the effect of causing firm and continuous uterine contraction. Found it safe to leave patient at 4 P.M., after applying a compress over fundus strapped down tightly with adhesive strips, with binder over all. Patient after this did well.

THOS. J. KEARNEY, M.D.

107 LEXINGTON AVENUE, NEW YORK.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 1 to December 8, 1883.

CARTER, W. F., Captain and Assistant Surgeon. Relieved from duty at Washington Barracks, D. C., to take effect at the expiration of his present leave of absence, and assigned to duty at Little Rock Barracks, Arkansas. S. O. 224, par. 4, Department of the East, November 30, 1883.

SHUFELDT, R. W., Captain and Assistant Surgeon. Now on sick leave, relieved from duty at Jackson Barracks, New Orleans, La. S. O. 224, par. 3, Department of the East, November 30, 1883.

RICHARD, CHARLES, First Lieutenant and Assistant Surgeon. Assigned to duty at Jackson Barracks, New Orleans, La. S. O. 224, par. 2, Department of the East, November 30, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 8, 1883.

KINDLEBERGER, D., Medical Inspector. Ordered to the U.S.S. Hartford, Pacific Station, per steamer of the 10th inst.

GIHON, A. L., Medical Director. Detached from duty as Member of Board of Inspection and Survey on the 15th inst., and placed on waiting orders.

PECK, GEORGE, Medical Director. Ordered to report on the 15th inst. as Member of the Board of Inspection and Survey.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 11, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 4, 1883.....	0	24	46	4	46	50	0	0
December 11, 1883.....	0	20	59	3	35	43	0	0
Deaths.								
December 4, 1883.....	0	12	7	4	7	16	0	0
December 11, 1883.....	0	4	8	3	6	28	0	0

THE STRUGGLES OF A YOUNG DOCTOR.—A correspondent writes: "In the town in which I am located we have twelve physicians and enough patients to go around, and myself and two other young physicians could do well enough but for a crime the older ones have committed, and are still committing, against the well-being and dignity of the profession. They prescribe for fifty cents and furnish from one- to six-ounce mixtures, either giving themselves away or the medicine. They make calls for one dollar and furnish medicines most of the time. They trust patients, and continue to do business for them, when accounts have not been settled for years. Of course they abuse us, patronize us, consult with us (the last is the worst, for we are very apt to lose our patient when they do), and sometimes let us assist at a surgical operation. We, on the other hand, are obliged to collect our bills in order to live, and so have adopted the rule of sending bills every thirty days; we charge the same fees without furnishing the medicine, and can you blame us if we retort upon their stories of drug clerks' mistakes, by stating our belief that their drugs must be poor, and that the patient has often to take what the doctor has in his office, not what would be the best thing for him. Lest this locality should be recognized, I would say there is one honorable exception, one who charges as is his right, is kind and just to the young men, and honest with his patients. Can you wonder, Mr. Editor, that in this place the physician is not treated with the respect due to his profession? Here his standing is something between that of a man who labors and the village storekeeper."

HINTS FOR MEDICAL STUDENTS.—According to the *Boston Medical and Surgical Journal*, the following was found posted on the bulletin board of the Harvard Medical School after the late examinations: "Dr. Edes wishes to call the attention of the graduating class to the following facts, which may be important to them and their patients. The doses referred to are NOT all from books which failed to receive 50 p. c. The following are too large doses: Half a grain of morphia, ten drops of Fowler's solution, to begin with; 10 c.c. of fl. ext. of conium; calomel, 7 grams; $\frac{1}{8}$ or $\frac{1}{4}$ grain of sulphate of atropia; 1 gram of sulphate of copper; half a gram of aloes every night, in habitual constipation. The following would make inconveniently large pills: One gram of pil. aloes et myrrh (no such pill made is officinal); 390 grams of sulphate of quinine and 130 grams of confection of roses made into six pills; 7 grams of calomel and 6 centigrams of blue mass. Pepsine and bismuth should not be given together. Lactopeptine is less efficient than pepsine. A teaspoonful of lime-water in a tumbler of milk does neither good nor harm. Calomel should not be used as an habitual cathartic (as was recommended in a good many books). Mercury alone cannot conveniently be made an ingredient of an extemporaneous pill. Blue-pill does not contain calomel. An apothecary cannot reasonably be expected to go out and kill a pig to make fresh pepsine for each prescription that comes in."

THE DIAGNOSTIC VALUE OF THE TUNING-FORK IN AURAL DISEASE.—Dr. Charles H. Burnett, of Philadelphia, after giving the conclusions on the above subject from a paper read by Dr. Sexton, before the American Otological Society, July 17, 1883, submits some original and practical reflections on the erroneous deductions made from the use of the tuning-fork, regarding the nature of aural disease, especially in reference to so-called cochlear inflammation, supposed disease of the auditory nerve, and altered perception of sound in syphilitic disease of the ear. Burnett thinks the phenomena of the vibrating tuning-fork when placed on the head or teeth have been misunderstood, and that false conclusions have been drawn in considering that the results thus obtained are reliable data for estimating the *perceptive* power of the nerve, rather than the *conductive* power of the auditory apparatus in the external and middle ear.

He therefore concludes that in the attempt that has been made to "establish" the existence of a "syphilitic cochlitis," the so-called acoustic phenomena may be accounted for much more easily by the supposition of altered conduction by reasons of changes in the mucous membrane, so well known to occur in syphilis, than by the difficult and entirely untenable view that the changes in audition are due to alteration in the nerve, and hence are phenomena of altered perception. This endeavor to remove the diagnosis from the nearer and more probable ground to a remoter and less known one has been not only unnecessary, but misleading; unnecessary, because the experiments of Helmholtz, Politzer, Buck, Hensen, C. H. Burnett, and McKendrick, upon the mechanism of the ossicles, and their relation to audition have been demonstrable *ad oculos* and have made clear the phenomena of condition of sound and how it may be interfered with; whereas we now know positively nothing about the mechanism of perception of sound in the labyrinth. Considering these statements to be correct, the endeavor to refer phenomena most probably occurring in the tympanic cavity, and attributable to changes in the conductive region, to a part of the ear unknown, excepting that it is concerned in all probability with perception, cannot but be regarded as unscientific, and misleading to younger minds. Moreover, it by no means follows that, because in the sudden deafness in syphilis a patient has been cured by an antisyphilitic remedy, that the disease lay in the cochlea and was due to "cochlitis," since it would be just as much proof, perhaps more, that the disease lay in the mucous membrane of the drum cavity, or of its contents, and, by interfering with sound conduction, had caused deafness, and that the latter had been removed by the anti-syphilitic action of the drug upon the mucous membrane. The writer furthermore believes that were we to encounter inflamed cochlear nerve-tissue, a cure could not be so easily accomplished as has been claimed, by any remedy, or, if the disease were removed, hearing would not be under such circumstances either quickly or completely restored.

The Use of the Rectal Lever in Amputation of the Thigh.—Mr. Crowell, of Westminster Hospital, recently amputated through the left hip-joint for old-standing disease of that articulation. The common iliac artery was successfully compressed by Davy's rectal lever. Only four ounces of blood were lost. The patient is reported to be progressing favorably. Recently Mr. Turner tied the right gluteal artery at the Seamen's Hospital, Greenwich. Mr. W. Johnson Smith communicated the following note on the case to the *British Medical Journal*: "Mr. Turner's patient was the subject of a very extensive traumatic aneurism of the gluteal artery, which vessel it was thought necessary to expose by dissection so as to tie it above and below the opening. As the patient was old, and had been much weakened by hemorrhage, it was very necessary to do all this without causing much further loss of blood; and as the abdominal compressor is an uncertain instrument, and likely by itself to cause shock, the operation on this patient would have been difficult, if not impossible, without the use of Davy's lever. This was applied, by the house surgeon, with thorough success. We saw the opening in the artery, and the double ligature was applied in an almost bloodless wound, and, beyond the blood already extravasated into the sac of the aneurism, there was not a further loss than of, at the most, half an ounce."

A School for Rickety Children.—Mr. Bernard Roth, of London, gives an interesting account in the *Lancet* of a school for rickety children, in Milan, Italy. He writes: "I paid in 1877 a long visit to the school for rickety children in Milan (Pio Istituto dei Rachitici in Milano), which is under the able medical superintendence of my friend Dr. G. Pini. The object of this school and of the similar one at Turin is to have rickety and deformed children under regular daily treatment for some years during school life. The afflicted children are fetched daily by omnibuses from the various public schools, and returned the same evening to their homes. At the School for Rickets a portion of each day is devoted to special orthopædic treatment by "medical gymnastics," rubbing and splints where necessary, while the rest of the day is devoted to lessons under certificated teachers, and to out-door games in a spacious playground. The children are also fed at the school, and receive the diet most suitable for rickets—viz., plenty of milk, phosphates, cod-liver oil, etc., according to each case. Forty children were present at my visit; most of them had more or less severe rickety deformities of the extremities, but I saw one case of severe spinal caries, and another of severe lateral curvature. Children as young as two years of age are received. There is a well-arranged bath-room on the premises. I noticed several rocking-horses and three different sizes of tricycles for the use of the children. Froebel's Kindergarten educational system is followed as far as possible.

Plastic Clay for Suppositories.—The use of plastic clay as a convenient material for suppositories in some cases is recommended by Dr. Trippier (*L' Union Pharmaceutique*, xxiv., 398). The ordinary sculptor's modelling clay is used, the medicaments being dissolved in water and then worked into the mass; in this way salts of iron and copper, alum, or even vegetable extracts may be incorporated by taking proper precautions. It is proposed to supply patients with the medicated clay, so that they can break off a portion and mould it between the fingers as required. There are difficulties in the way of maintaining the proper consistence. These accidents may be overcome by keeping the clay under a bell-glass in a moist atmosphere, or by the employment of glycerine, which is also said to have the additional advantage of giving stability to a mixture containing iodide of potassium. The formula for such a mass is: clay, 500 grammes; water, 50 grammes; potassii iodidi, 30 grammes; glycerine, 100 grammes.—*Pharmaceut. Journ.*

Premature Sexual Development.—The following interesting case is reported in the current number of *Amer. Jour. of Obstetrics:* Child now two years seven months old, began to menstruate when four months old. Flow comes regularly every twenty-eight days, and lasts four or five days. She weighs forty-nine pounds. Has features and form of a girl ten or twelve years old. Mammary glands as large as small oranges. The mons veneris is well developed and covered with a full growth of hair. The external labia large, and all parts of the vulva fully formed. All functions seem to be performed normally. Has never shown any disposition to handle her parts or masturbate in any way. Is quite modest with her mother, and particularly so with her father. Her tastes belong to a child much older. She is bright and intelligent, but easily irritated, especially at the beginning of the menstrual epoch. Parents not related. Family history good. No other case of the kind ever known in family. Her future sexual history will be very interesting. At what age can the menopause be expected? In a Brooklyn Museum the "Baby Venus" is on exhibition. She is a child three years old, weighs sixty-five pounds, health perfect, has never been sick, features of a young lady, and mammary glands fully developed. Pelvis and vulva much more fully developed than in children of her age. Has never menstruated. In our last number we mentioned two cases of temporary sexual development in children, caused by local irritation and reflex action it was thought. These two cases have no local cause and are permanent.

Chloroform and Carbonate of Ammonia in Labor are recommended by Dr. W. C. Van Bibber (*Maryland Medical Journal*). Dr. Van B. thinks that the combination is safer and less depressing than chloroform alone.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 25 NEW YORK, DECEMBER 22, 1883 Whole No. 685

CITY HOSPITAL

Original Articles.

CEREBRO-SPINAL FEVER.

(SPOTTED FEVER. CEREBRO-SPINAL MENINGITIS.)

BY J. LEWIS SMITH, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, BELLEVUE HOSPITAL MEDICAL COLLEGE.

(Continued from p. 646.)

Prognosis.—Cerebro-spinal fever is justly regarded as one of the most dangerous maladies of childhood. It is dreaded not only on account of the great mortality which attends it, but on account also of its protracted course, the suffering which it causes, the possible permanent injury of the important organ which is chiefly involved, and the not infrequent irreparable damage which the eye and ear sustain.

I have the records of the result in 52 cases which I attended or saw in consultation in the epidemic of 1872. Of these just half recovered. Sixteen of the twenty-six who died were hopelessly comatose within the first seven days, most of them dying within that time, and some even on the first and second days, while others of the sixteen lingered into the second week and died without any sign of returning consciousness. The remaining ten, who subsequently died, but did not become comatose in the first week, were nevertheless seriously sick from the first day, but their symptoms, though severe, were not such as necessarily indicated a fatal result, so that there was some expectation of a favorable ending till near death, which occurred for the most part from asthenia. One succumbed to purpura hæmorrhagica, the hemorrhages occurring from the mucous surfaces, and two died after a sickness of more than two months, in a state of extreme emaciation and prostration. The twenty-six who recovered convalesced slowly and usually after many fluctuations.

Their highest temperature and most severe and dangerous symptoms occurred in the first week. Most of them were several weeks under observation and treatment before they sufficiently recovered to be out of danger. The statistics of this epidemic therefore show, and the same is true of other epidemics, that the first week is the time of greatest danger, and if no fatal symptoms are developed during this week recovery is probable with proper therapeutic measures and kind, intelligent, and efficient nursing, the latter of which is very important.

Since the epidemic of 1872 I have treated, or seen in consultation, 35 cases that I was able to follow to the close, most of them in the last four years. Of these 19 recovered and 16 died. Of the 16 fatal cases 8 died in the first week, 5 in the second week, 1 on the twenty-fifth day, 1 on the thirty-first day, and 1 in the sixteenth week. This last patient, a boy of ten years, would, in my opinion, have recovered with better nursing. His death occurred from large bed-sores which extended to the bones, produced, though attended by his mother, by lying a long time in one position on a hard bed when he was too weak to move, and often with soiled bed-clothes underneath him.

There is probably no disease which falsifies the predictions of the physician more frequently than cerebro-spinal fever. This is due partly to the severity of the cerebral symptoms in the commencement, which, did they occur in other forms of meningitis with which he is more familiar, would justify an unfavorable prognosis, and partly to the remissions and exacerbations, the occurrence alternately of symptoms of apparent convalescence and recrudescence or relapse, which characterize the course of this malady. Grave initial symptoms, which may appear to have a fatal augury, are often followed by such a remission that all danger seems past, and in a few hours later, perhaps, the symptoms are nearly or quite as grave as at first.

Under the age of five years, and over that of thirty, the prognosis is less favorable than between these ages. An abrupt and violent commencement, profound stupor, convulsions, active delirium, and great elevation of temperature, are symptoms which should excite solicitude and render the prognosis guarded. If the temperature remain above 105° death is probable, even with moderate stupor. Numerous and large petechial eruptions show a profoundly altered state of the blood, and are therefore a bad prognostic, and so is continued albuminuria, since it shows great blood change, or nephritis, while other organs than the kidneys are probably also involved. In one case, a boy, whom I examined nearly a year after the cerebro-spinal fever, the kidneys were still affected. He had anasarca of the face and extremities, with albuminuria. Chronic Bright's disease had occurred from the acute nephritis, which complicated cerebro-spinal fever. Profound stupor, though a dangerous symptom, is not necessarily fatal so long as the patient can be aroused to partial consciousness and the pupils are responsive to light; so long as it does not pass into actual coma it is less dangerous than active or maniacal delirium, which is apt to eventuate in this coma.

A mild commencement, with general mildness of symptoms, as the ability to comprehend and answer questions, moderate pain and muscular rigidity, some appetite, moderate emaciation, little vomiting, etc., justify a favorable prognosis, but even in such cases it should be guarded till convalescence is fully established.

We may repeat and emphasize the important fact shown by the above statistics, that patients who live till the close of the second week without serious complication will probably recover. The danger after this period is, in most instances, from exhaustion and feeble action of the heart, resulting from the impaired nutrition and protracted course of the disease.

Complications, which most frequently pertain to the lungs, increase greatly the gravity of many cases and contribute to the fatal ending. The fact that Webber, in his prize essay, describes a variety of cerebro-spinal fever which he designates pneumonic, and that those who make post-mortem examinations find that "œdema, hypostatic congestion of the lungs, bronchitis, atelectasis, and broncho-pneumonia, are extremely common lesions in cerebro-spinal meningitis" (Welch), indicates a source of danger in addition to that located in the cerebro-spinal system. One close observer of an epidemic writes: "In all the fatal cases which came under my notice, the most prominent symptoms which preceded death were those which indicate impairment and perversion of the respiratory functions. As the breathing became more hurried and difficult, the general depression became more intense, the pulse became weaker and quicker, and the temperature of the skin more elevated."

Parenchymatous degeneration of the liver and kidneys

is another serious complication. The kidneys are probably more frequently, and to a greater extent, diseased than the liver. Acute diffuse nephritis was present in one of the eight cases examined after death by Prof. Welch. In the *Revue Médicale* for June 3, 1882, M. Ernest Gandier published the case of a female who died comatose on the sixth day of cerebro-spinal fever. Examination of the urine had revealed the presence of "retractile albumen of Prof. Bouchard, attributable to renal lesions, and non-retractile albumen, considered as an indication of some general infection of the system." Microscopic examination of the kidneys "showed considerable swelling and granular degeneration of the renal epithelial cells, with effusion of granular matter within the lumen of the tubules." We have seen from the case alluded to above that the renal complication may persist and become chronic. Those who fully recover often exhibit symptoms usually of a nervous character, as irritability of disposition, headache, etc., for months after convalescence is established.

Diagnosis.—Cerebro-spinal fever, on account of the nature and severity of its symptoms and the suddenness of its onset, may be mistaken for scarlet fever, and *vice versa*. In one instance, to my knowledge, this mistake was made. High febrile movement, vomiting, convulsions, and stupor, are common in the commencement of scarlet fever, and the same symptoms commonly usher in the severer forms of cerebro-spinal fever. It will aid in diagnosis to ascertain whether there be redness of the fauces, for this is present in the commencement of scarlet fever, and a few hours later the characteristic efflorescence appears on the skin.

The diagnosis of cerebro-spinal fever from the common forms of meningitis is ordinarily not difficult, for while in the former the maximum intensity of symptoms occur in the first days, in the latter there is a gradual and progressive increase of symptoms, from a comparatively mild commencement. Moreover, cases of ordinary or sporadic meningitis occurring at the age when cerebro-spinal fever is most frequent, are commonly secondary, being due to tubercles, caries of the petrous portion of the temporal bone, or other lesion, and are therefore preceded and accompanied by symptoms which are directly referable to the primary disease. We have seen how different it is in cerebro-spinal fever, which in most patients begins abruptly in a state of previous good health. Again, in cerebro-spinal fever, after the second or third day, hyperæsthesia, retraction of the head, and other characteristic symptoms occur, which are either not present or are much less pronounced in ordinary meningitis. Some of the milder cases of cerebro-spinal fever might be mistaken for hysteria, but the pain in the head and elsewhere, muscular rigidity, and especially the occurrence of more or less febrile movement, enable us to make the diagnosis. Continued fever, typhus or typhoid, resembles cerebro-spinal fever in certain particulars, but it lacks the muscular contraction and rigidity which characterize the latter. It does not usually begin so abruptly, with such severe symptoms, especially such severe headache, has less marked fluctuations, and a more definite duration. These facts, in connection with the character of the prevailing epidemics, will enable us to make the diagnosis. In one instance commencing retro-pharyngeal abscess, probably associated with vertebral caries, was at first mistaken by me for cerebro-spinal fever. The patient was an infant, had a temperature of 104°, stiffness of the neck with some retraction of the head, and cried from pain when the head was brought forward. The speedy occurrence of two large abscesses in other parts of the system, difficult deglutition and noisy respiration, led to a digital exploration of the fauces, when the abscess was found and lanced.

Treatment.—Since in epidemics of cerebro-spinal fever cases are most frequent and severe where anti-hygienic conditions exist, it is evident that measures looking to the removal of such conditions, measures designed to procure pure air in the domicile, wholesome diet and a quiet and regular mode of life, in fine, measures designed to produce the highest degree of health, are of the first importance for the prevention of the disease. Cleanliness of the streets and areas, as well as apartments, perfect sewerage and drainage, the prompt removal of all refuse matter, avoidance of over-crowding; in a word, the strict observance of sanitary requirements in every particular, will, there can be little doubt from what we know of the causation and nature of cerebro-spinal fever, diminish the number and severity of the cases. The avoidance of fatigue and overwork, of mental excitement, the use of plain and wholesome diet, sufficient sleep, the utmost regularity in the mode of life with the least possible exposure to depressing agencies, are the important preventive measures which should be recommended wherever an epidemic of cerebro-spinal fever is occurring.

It is probable that the young man who, still weak from an attack of typhoid fever, applied himself closely to his business, of a perplexing nature, which had suffered from his absence, and in a few days was seized with headache and vomiting and soon died of this malady, would have escaped by a more prolonged rest, and less mental excitement and worriment. It has seemed to me that those children whose cases are embraced in my statistics, that left home in the morning entirely well, and when engaged in their studies, subject to the noise and discipline of the public schools, which is often too severe and rigorous for sensitive children, were attacked with this disease, would probably have escaped in the quiet of their own homes. The girl that, failing of promotion in her school, returned home crying, and closely applied herself to her studies till she was compelled to desist by the severe headache which ushered in cerebro-spinal fever, perhaps would have remained well had her experiences in the school been more pleasant and less depressing. In a similar manner the two children that were attacked with cerebro-spinal fever immediately after mild punishments which they had received, but which produced mental excitement, perhaps would have escaped under less severe family discipline.

The enjoining of a quiet and regular mode of life as a preventive measure, during the occurrence of an epidemic of cerebro-spinal fever, is not inconsistent with the theory that the cause is a micro-organism. It is not unreasonable to suppose that the system may be more or less under the influence of the specific principle, that this principle may obtain lodgment in the blood or tissues without result until some exciting cause occurs which depresses the system and disturbs the functions, when the resisting power fails and cerebro-spinal fever appears; just as those exposed to Asiatic cholera may remain well until some imprudence in the diet or the mode of life causes an outbreak of the malady.

Curative treatment.—In the commencement of cerebro-spinal fever, intense inflammatory congestion occurs of the cerebral and spinal meninges, and also to a certain extent of the brain and spinal cord. As regards treatment, the obvious indication is to reduce the hyperæmia of the vessels as quickly as possible and subdue or diminish the inflammation. For this purpose bags or bladders of ice should be immediately applied over the head, and to the nucha, and constantly retained there as long as there is no complaint of chilliness, no marked diminution of the temperature, and the patient experiences some relief from the intense headache and other symptoms. Bran mixed with pounded ice produces a more uniform coldness and is sometimes more agreeable to the patient than the ice alone. The bag or bags should be about one-third full, so as to fit upon the head like a cap, and the nurse should be instructed to renew the ice as soon as it melts. In severe cases, with marked elevation of temperature, it is proper to apply cold over the dorsal and lumbar vertebræ, as well as upon the head and nucha. A hot mustard foot-bath or a general warm bath in those

cases in which convulsions are present or threatening, or there is delirium or great agitation or severe peripheral pains, is also useful, since it has a calmative effect and acts as a derivative from the hyperæmic nerve-centres. One writer states that he obtained marked benefit in a case by immersing the body to the neck in hot water.

The abstraction of blood, usually by leeches applied to the temples, behind the ears, or along the spine, has been employed, but even in the commencement of the present century, when it was customary to bleed generally and locally in the treatment of inflammatory and febrile diseases, a majority of the American physicians whose writings are extant discountenanced the use of such measures in the treatment of this disease. Drs. Strong, Foot, and Miner, though under the influence of the Broussaian doctrine, were good observers, and they soon abandoned the use of the lancet and leeches in the treatment of these patients for more sustaining measures. Strong, who published a paper on spotted fever in the *Medical and Physiological Register*, in 1811, states that certain physicians employed venesection as a means of relieving the internal congestions, but finding that the pulse became more frequent after a moderate loss of blood, they soon laid aside the lancet. Some experienced physicians of that period, however, continued to recommend and practise depletion, general as well as local, as, for example, Dr. Gallop, who treated many cases in Vermont, in the epidemic of 1811.

Venesection in the treatment of cerebro-spinal fever is universally discarded at the present time in this country and in Europe, but some intelligent physicians, as Sanderson and Niemeyer, approve of local bleeding in certain cases. It is, in my opinion, after examining the histories of many cases, uncertain whether the abstraction of blood should ever be recommended, but if it be prescribed, it should be on the first day, when the hyperæmia is greatest, by the application of only a few leeches behind the ears, and never except when convulsions or coma are present or threatening, and the patient is robust. The fact should not be forgotten that cerebro-spinal fever is in its nature asthenic and protracted, and that the intense inflammatory congestion of the nervous centres can ordinarily be relieved, if relieved at all, by the other measures recommended, which do not reduce the strength. The alarming symptoms which usher in an attack, the intense headache, restlessness, delirium, sometimes eclampsia or coma, seem to demand the most energetic treatment, and yet it is surprising to one who has his first experiences with this malady how patients under proper treatment, without the abstraction of blood, emerge from an apparently almost hopeless state and ultimately recover. There may be total unconsciousness, the pupils dilated like rings and insensible to light, the head intensely hot, tonic convulsions present or alternating with frequent clonic convulsions, and yet these symptoms, which in any other disease would be regarded as sufficient to justify the prognosis of certain death, may gradually pass off toward the close of the first or in the second week, and the case afterward progress favorably. In the New York epidemic of 1872, previously to which physicians of this city had no personal experience with cerebro-spinal fever, many cases were pronounced hopeless which ultimately did well without abstraction of blood. In a case occurring in the practice of Dr. Griswold the patient was comatose for three days, with pupils not responding, or but very feebly responding to light, but he recovered without the abstraction of blood, and with the remedies ordinarily employed. In a case which we will presently relate, in speaking of another local treatment, the patient was still insensible in the third week, with pupils greatly dilated and insensible to light, and yet recovered without losing blood. Such cases show that the most urgent symptoms, such as seem to indicate the prompt employment of leeches in order to reduce the meningeal hyperæmia and the consecutive congestion of the nerve-centres, may be relieved and the patient recover without such depletion, and with the preservation of the blood, which is so much needed in the subsequent asthenic course of the malady.

In only one case have I recommended the abstraction of blood, and this was so instructive that I will briefly relate it: A girl, four years of age, was seized on March 7, 1873, with vomiting, chilliness, and trembling, followed by severe general clonic convulsions lasting about fifteen minutes; was semi-comatose; pulse, 132, and a few hours later, 156; temperature, 101¼°; respiration, 44; eyes closed, pupils moderately dilated and feebly responsive to light, dusky mottling of skin, constant tremulousness with twitching of limbs. Bromide of potassium was administered in hourly doses of four grains, ice applied to the head and nucha, and a hot mustard foot-bath followed by sinapisms to the nucha. On the following day, March 8th, she was partly conscious, when aroused, but immediately relapsed into sleep, head retracted, bowels constipated; pulse, 136; temperature, 102°; vomits occasionally. It was thought proper, on account of the extreme stupor, to apply one leech to each temple and the bites trickled slowly nearly five hours. The other treatment was continued. On the 9th the pulse was 180, so feeble that it was counted with difficulty; temperature, 101½°. The patient was evidently sinking. It was necessary to order whiskey in teaspoonful doses every two hours, with beef-tea and other most nutritious drinks. Evening, pulse, 172, still feeble. March 10th, pulse, 180, barely perceptible; great hyperæsthesia; axillary temperature, 100°; axes of eyes directed downward. After this the patient gradually rallied for a time, the pulse becoming stronger and less frequent, but death finally occurred after nine weeks in a state of extreme emaciation and exhaustion. Slight convulsions occurred in the last hours.

It is seen that in the above case, which may be regarded as typical, the patient passed into a state of extreme prostration after the application of the leeches, so that for three days I did not believe that she would live from hour to hour, and death occurred after an illness of nine weeks, apparently from sheer exhaustion. Experience like this, which corresponds with that of most other observers, shows the necessity of preserving the blood and thereby the strength, however urgent the initial symptoms, inasmuch as cerebro-spinal fever in its subsequent course is attended by such marked asthenia. On May 3, 1878, a boy of ten years was admitted into one of our best hospitals, in the service of a prominent New York physician. It was stated that he had been four days sick with cerebro-spinal fever, and among other characteristic symptoms he had had delirium every night and on May 2d delirium in the daytime, which had abated considerably after free epistaxis. In the hospital the application of ten leeches along the spine was ordered, but it does not appear to have diminished the delirium or any other symptom, and on the following day the pulse was so frequent and feeble that active stimulation by brandy was resorted to. He had three severe convulsions on May 13th, which were relieved by ice to the head and nape of neck, and by six minims of Magendie's solution. Severe pains occurred at times in the back and limbs, and on the 29th, one month after the commencement of the disease, the severe pain frequently recurring, twelve leeches were ordered to be applied to the spine. On June 2d the limbs were flexed and quite stiff, and the effort to move them was attended by great pain. The pain in the back was also more constant, and in consequence sixteen leeches were applied to the spine. The next day there was no pain, but the patient was very stupid. On June 6th the records state that he was obviously losing strength day by day, that his emaciation was extreme and his anæmia very marked. But he had great vitality, and although he had strabismus, bed-sores, incontinence of urine and fæces, and extreme prostration, he lingered till August 1st. At the autopsy,

"body, a skeleton; brain, dura mater, and pia mater appear normal, except a little thickening of latter at base of brain; ventricles much enlarged and full of clear serum; surface of walls of ventricles looks normal but is soft; spinal cord and membranes appear normal to the naked eye." No disease was discovered in other organs except that the liver appeared congested and the kidneys pale. It can scarcely be doubted that, although some temporary relief from the pain may have resulted to this patient by the repeated application of leeches, which diminished the meningeal hyperæmia, yet his chances for ultimate recovery would have been far better without such depletion. Therefore the histories of cases show that the result of abstraction of blood has been unsatisfactory, on account of the asthenic nature and protracted course of cerebro-spinal fever, and it should be very rarely, if ever, recommended as a remedial agent.

Some benefit is apparently derived from the application of stimulating and moderately irritating lotions along the spine. A liniment consisting of equal parts of camphorated oil and turpentine briskly applied by friction with flannel up and down the spine till redness is produced, appears to cause some alleviation of the suffering and it does not conflict with the use of the ice-bag. Dr. William H. Sutton, of Dallas, Texas, has published the following interesting case, showing the benefit from stimulating and irritant applications over the spine made in an unusual manner. A child, aged three and one-half years, had been three weeks under treatment through error of diagnosis for supposed continued fever. When Dr. Sutton assumed charge of the case on November 20, 1877, the pupils were greatly dilated and insensible to light; features pallid and pinched; pulse, 130; temperature, 103°; patient totally unconscious. November 21st, morning temperature, 105°; pulse, 140; evening temperature, 101¼°; pulse, 120. November 22d, morning temperature, 106½; pulse, 160; restless; evening temperature, 105½°; pulse, 120; had not slept except for a few moments for nearly two weeks. A strip of flannel saturated with turpentine was placed over the spine from the neck to the sacrum, and a hot smoothing iron was run up and down it, and eight drops of the fluid extract of ergot were given every three hours. Dr. Sutton adds: "The father stated to me that as soon as the application was finished the child fell asleep, and slept several hours—the first for two weeks—and the fever rapidly declined. From this time he began to improve and gradually and fully recovered. The use of irritating applications over the spine in the treatment of cerebro-spinal fever has been long and favorably known, but the mode of applying it practised in the above case is novel.

Internal treatment.—It will aid in the selection of the proper remedies to recall to mind the pathological state which we know to be present from the many autopsies which have been recorded. We have seen that the largest mortality, and consequently the most dangerous period, is in the first days, when there is intense suddenly developed inflammatory congestion of the meninges, with more or less secondary hyperæmia of the underlying brain and spinal cord, producing great headache, delirium, or somnolence, with exaggerated reflex irritability of the spinal cord, so that eclampsia is a common and fatal complication.

Fortunately a remedy has been discovered in modern times, the bromide of potassium, which acts promptly and efficiently. It can be safely administered in large and frequent doses to the youngest child. It is quickly eliminated from the system through the kidneys and other emunctories in children, so as to prevent the occurrence of bromism, at least to the extent of causing any unpleasant consequences. It causes contraction of the minute vessels of the nervous centres so as to diminish the hyperæmia, as shown by the experiments and observations of Dr. Putnam-Jacobi and others, and at the same time it diminishes, in a marked degree, the reflex irritability of the spinal cord, two most beneficial and important effects of its use in this disease. Many children by its timely employment are saved from the dangers of eclampsia, and by its sedative effect on the nervous system and contractile action on the capillaries it probably diminishes the intensity of the inflammation and the amount of exudation. I usually prescribe it, as recommended by Dr. Squibb, dissolved in simple cold water In ordinary cases not attended by eclampsia or marked symptoms which show that eclampsia is threatening, I usually prescribe at my first visit about four grains every two hours to a child of two years, who has the usual restlessness and apparent headache, and six grains to a child of five years. If eclampsia occur, the bromide should be given more frequently, as every five or ten minutes till it ceases. It is important to be able to determine when the quantity of the bromide administered should be diminished, and when its use should be discontinued. I have very rarely observed bromism in children, and never to the extent of doing any serious harm, though for many years I have administered it in large and frequent doses whenever the occasion seemed to require it, but the symptoms of bromism cannot readily be discriminated from those which may result from cerebro-spinal fever such as muscular weakness, dilated pupils, with perhaps impaired vision, unsteady gait, nausea, or vomiting, and abdominal pains. If the case progress favorably, frequent and large doses should, in my opinion, be given only in the first week, after which the doses should be at longer intervals or smaller. But during exacerbations, which are apt to occur from time to time till the patient is well on the way to recovery, the use of the bromide in full doses is again indicated till the urgent symptoms begin to abate.

Ergot is another very important remedy. It is scarcely less useful than the bromide, from its known action in contracting the arterioles and diminishing the flow of arterial blood. The fluid extract, tincture, or wine of secale cornutum can be employed, or its active principle ergotine. In this city I think that Squibb's fluid extract has been more used than any other preparation. I have commonly prescribed it except for patients old enough to take ergotine in the pill. The doses employed by different physicians vary greatly. Dr. William A. Thomson, Professor of Materia Medica in the New York University, has prescribed, so far as I am aware, the largest doses in the treatment of this disease, to wit, one teaspoonful of the fluid extract of secale cornutum every three hours to a boy of ten years in Roosevelt Hospital in 1878, with apparent benefit as regards the meningeal hyperæmia, although the case was fatal after the lapse of several months from asthenia. The alkaloid ergotine, to which the beneficial effects of the secale cornutum are due, may be given in the pill or in solution. In case of much irritability of the stomach it can be employed hypodermically, dissolved in water with glycerine. The efficacy of this agent is most marked during the first and second weeks, when the congestion of the nervous centres is greatest. At a more advanced stage, when there is less congestion and the danger arises from the inflammatory products and structural changes, the time for the use of ergot is passed, or if it is still of some service it is less needed than at first and should be given less frequently.

The severe headache and restlessness which attend many cases, require the occasional use of an opiate, or the hydrate of chloral. The chloral in proper dose never fails to give quiet sleep, and it is supposed by some who have studied its therapeutic action that it diminishes the cerebral circulation. It is therefore an useful adjuvant to the bromide. Five grains usually suffice for a child of six to eight years. The chloral is especially useful in cases attended by eclampsia, or symptoms which threaten eclampsia, since it acts promptly and decidedly in diminishing reflex irritability. Formerly it was considered injudicious and unsafe to prescribe opiates in meningeal inflammation, since it was supposed that

they increased the liability to coma, but experience shows that they are sometimes very useful in this disease when administered in small or moderate doses, and without the risk which was once supposed to be incurred by their use. The thirty-second part of a grain of morphia administered at intervals of some hours was sufficient to relieve the suffering of one of my patients at the age of six years.

Quinia does not seem to exert any marked controlling effect on the course of cerebro-spinal fever or its symptoms, although the paroxysmal character of the severe pains in many patients suggests the use of this agent as an antiperiodic. It was frequently prescribed by New York physicians in the epidemic of 1872, but I believe that the opinion was unanimous that it was not the proper remedy. I have prescribed it in large and small doses, in one instance giving fifteen grains to a child of thirteen years, but do not know that I ever derived benefit from its use in this malady.

When the acute stage has abated, measures designed to remove the serum, which is apt to remain, constituting a hydrocephalus, are indicated. For this purpose the iodide of potassium is probably more useful than any other agent. It is administered by some physicians early, along with the bromide, as they have been in the habit of treating other forms of meningitis. I have prescribed it with the bromide, and alone when the bromide was discontinued, but whether it produces a sorbefacient effect in this disease seems to me doubtful.

The result depends to a great extent on the nursing. The skill of the physician may be thwarted and the life of the patient lost by inefficient nursing. No other disease more urgently requires kind, intelligent, and constant attendance night and day on the part of the nurses. Not only should the medicines and nutriment be given punctually and regularly, but the great restlessness of the patient in the first days requires constant readjusting of the ice-bags, and during the long period of convalescence the utmost care is required to remove at once the excretions in order to prevent bed-sores, and to give the proper amount and kind of nutriment to prevent the emaciation and weakness from which many perish. Among my cases are those who owe their recovery largely to the untiring devotion of mothers. The one that died of bed-sores I have little doubt would have recovered had the nursing been such as some of the others received.

The diet, from the beginning to the end of the malady, should be the most nutritious, and such as is easily digested. It is necessary to give it in the liquid form, unless in mild cases in which the appetite may not be entirely lost. It is proper to aid the digestion by pepsine preparations. Nutritive enemata, consisting of beef-tea, or Leube's extract of beef, milk, and brandy aid in averting the fatal prostration in protracted cases. After the acute stage has passed by and the meningeal hyperæmia has abated, the alcoholic compounds in moderate doses, which in the beginning would be very injurious, may now be useful, administered regularly by the mouth. The room should be dark, well ventilated, and quiet. All sympathizing friends who are not required in the nursing should be excluded. I know no other disease in which this is so necessary, for mental excitement may produce dangerous aggravation of symptoms. Recently a young lady, to whom I made one visit in consultation, and whose recovery seemed probable, was allowed to receive the visit of a young gentleman. Immediately after his departure her headache was intensified, the symptoms became generally aggravated, and the result in a few days fatal.

THE PROPORTION OF MEDICAL PRACTITIONERS TO POPULATION OF DIFFERENT COUNTRIES.—The proportion of medical practitioners in different countries is as follows: France, 2.91 per 10,000; Germany, 3.21 per 10,000; Austria, 3.41 per 10,000; England, 6 per 10,000; Hungary, 6.10 per 10,000; Italy, 6.10 per 10,000; Switzerland, 7.06 per 10,000; United States, 16.24 per 10.000.

WIRING OF FRACTURED PATELLÆ.

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THE following cases were operated upon by me in Bellevue Hospital during the visiting service of Dr. Charles McBurney, and my obligations are due to him for his kindness in deputing to me the treatment of cases during his absence from the city on summer vacation, it being during this time that these cases entered his wards.

I am prompted to report them thus early in their history, and during the convalescence of one case, as the reading of Mr. Lister's paper at the meeting of the Medical Society of London on October 27th has excited an active discussion in that city, evidencing wide differences of opinion as to the propriety of the operation in certain cases.

It gives me great pleasure, then, to have this opportunity to report three successful cases; firstly, as evidence of the success of the operation in securing bony union of the fragments; and, secondly, as to the dependence of success upon antiseptic methods, the laying open of a knee-joint presenting the best of opportunities for testing the value of one special form of operating.

As the details of the operation have differed somewhat in my cases from those described by Mr. Lister in his paper (vide *Lancet*, November 3d), I will, for brevity's sake, omit a formal description of the operation and include it in the history of the cases.

CASE I. *Compound comminutea fracture of left patella.*—Alex. C——, aged forty-five, contractor's foreman, entered Ward 8, July 22d, 11 P.M. About two hours before, when under the influence of liquor, he fell from the second story of a building, striking his knee on an iron grating covering a coal shute. On entrance patient still alcoholic. Examination revealed a compound comminuted fracture of the patella. The wound was on the front of the joint, directed downward and outward, somewhat ragged, and one and one-half inch in its long diameter. A temporary dressing of iodoform and bichloride of mercury was applied for the night; a posterior splint and an ice-cap.

On the following day, Dr. McBurney being engaged in a private operation, he directed me to attend to the case. The operation was performed under almost constant irrigation with bichloride of mercury—one part to two thousand; the limb having been previously prepared by shaving, washing with soap and water and the bichloride solution, and the arrangement of wet towels about it having been made, the extremities of the wound were extended, the incision then being oblique to the axis of the limb. The capsule was found only moderately lacerated. This moderate degree of laceration I believe to be the case in fractures due to direct violence. The lower half of the patella was found badly comminuted, and the fragments so loosely attached to the periosteum that it was necessary to remove all but two pieces. The larger of the two was about the size of an ordinary chestnut, the smaller half that size. The patella now consisted of three pieces, the upper fragment comprising a little more than one-half the bone. With a common brad-awl I then drilled one channel in the upper fragment, the drill passing obliquely down to, but not through, the articular cartilage. A corresponding channel was bored in the larger of the two lower fragments, and they were brought together with a suture of silver wire. The hospital wire was so fine and brittle that I was obliged to use it double. The smaller lower fragment I found was best kept in position by suturing it to the larger lower fragment. For this I used a large violin string, which I had prepared and made aseptic after Kocher's method. The next step was to wash out the joint, which I thoroughly did through a Nélaton catheter, using the bichloride solution. Mr. Lister does not mention this step in his description of his operation, and I am told

that he does omit it; but it seems to me that freeing a joint of blood clots and bloody serum renders it purer than it would be if they were permitted to remain in.

Next the insertion of the drainage-tubes and the suturing of the capsule occupied my attention. The wound in the capsule was about an inch in length on either side of the patella, and I was satisfied to place a drainage-tube at each extremity of the wound, believing that with the subsequent elevation of the foot the tubes would be at nearly the most dependent portion of the joint. The tubes were of rubber, medium size, and their inner ends were just within the capsule, not more. I then, with cat-gut, sutured the capsule, finding no difficulty in taking it up laterally to the patella, and in front of the bone where it is continuous with the periosteum it can be sewed with little trouble. This suturing of the capsule I regard as a very important procedure. Mr. Lister omits it in his description of his operation, and, I believe, also in his practice; but to my mind it is one of the most important steps in the operation. If the capsule is well sutured the joint is practically closed and shut, and what serum exudes or synovia forms, drains through the tubes into the dressing, and not into the loose cellular tissue between the capsule and the skin, where it must drain if the capsule is not sutured. Again, with the capsule sutured it heals independently of the skin, lessening the danger of an adherent cicatrix. Moreover, the soft tissues in front of the joint must be thicker and stronger with a sutured capsule than without it.

The ragged edges of the skin were trimmed and then united with cat-gut. Three short drains leading into the areolar tissue between the capsule and the integument were employed. I neglected to mention that the disposition I made of the twisted ends of the wires was to turn them down between the fractured surfaces. I think this preferable to hammering them into the anterior face of the patella. Of course it is intended that the wire should remain permanently in the bone. When drawn tightly, and the ends disposed of as above, it becomes embedded in the bone, and I have never heard of it causing trouble either in patellæ or in long bones where I have employed it in resections. If the wire is employed for a temporary purpose, complete healing of the skin is delayed, and its removal is not always an easy matter. A final washing-out of the joint through the tubes was made, the fluid running through clean and clear. The tube ends and the wound were well dusted with iodoform, protectives applied, more iodoform, then moist bichloride gauze to act as the absorbent part of the dressing. Then a thick boracic acid cotton dressing, an evenly compressing bandage, and the wound dressing was complete. I should have mentioned that all vessels were ligated, as cut, with cat-gut, and the wound was perfectly dry in a vascular sense when closed. An anterior plaster-of-Paris splint was applied, reinforced with a wire-gauze frame. Patient put to bed and the leg suspended at an angle of 45°. No special after-treatment was employed. Patient's temperature never went above 100°, and after the fourth day it was normal.

August 7th.—Fifteen days after the operation, the dressings were changed to remove the tubes. Primary union of the skin had taken place. The joint looked normal.

August 17th.—Again dressed, and the sinuses formed by the tubes were found closed.

August 24th.—Splint removed and patient allowed to move the leg as much as he felt inclined. Motion was gradually established, and October 15th patient was discharged.

No passive motion had been employed, and he could flex his leg to a right angle with the thigh, and there was no doubt but that there was bony union. One leg was as good as the other.

CASE II. *Simple fracture of left patella, due to muscular action; wide laceration of the capsule.*—James S——, aged twenty-three, watchman, entered Ward 10, September 6th. The history pointed directly to a fracture from muscular violence. Up to the day of the operation patient was treated on a posterior splint, with foot elevated and an ice-cap over the joint.

September 24th.—The inflammation having nearly subsided I proceeded to wire his patella. A transverse incision about one and half inch in length was first made, and either extremity of it extended until the incision in the skin corresponded to the rent in the capsule. This was nearly four inches in length. I would digress from the description of the case to discuss the relative merits of the vertical and the transverse incision. In this case especially, and in the two others to a greater or less extent, a vertical incision would not have permitted me to examine the torn capsule, or the joint, or the fractured bone as I desired to. Mr. Lister and the other gentlemen in Great Britain who have done this operation all employ the vertical incision, and it is noticeable that they omit to say anything about the capsule. If the capsule is disregarded the vertical incision is all sufficient for purposes of wiring the bone, and leaves a smaller and perhaps a better situated scar than does the transverse incision; but to my mind the capsule is all important, and the incision through the skin should be made to facilitate getting at it for the purpose of suturing it. In a fracture due to direct violence, be it simple or compound, the vertical incision may be sufficient, for in such a case the rupture of the capsule is insignificant; but in a fracture from muscular violence the transverse incision will be necessary, as the capsule in that class of cases is widely ruptured. To return to Case II., the direction of the fracture was transverse, and exactly through the middle of the bone. The separation of the fragments was about an inch. Fringes of aponeurotic and fascial structure hung down between the fragments, and on each fractured surface was a blood clot so hard and tenacious that it could only be detached by means of a sharp spoon. Underlying this was healthy bleeding bone. The joint contained blood clots and bloody serum. It was washed out as in the first case. Two wires were employed, the fragments accurately adjusted, and the wire ends thrust down between the fractured surfaces. The edges of the capsule were trimmed, sutured with one line of catgut, the skin with a second. A similar arrangement of tubes as in the first case; dressing the same.

This patient's highest temperature was 100.5°. Dressing changed and tubes removed on the eleventh day. A narrow line of the sutured integument had sloughed, probably due to pressure over the patella from the dressing, but a few skin grafts rapidly closed the ulcer. At the end of seven weeks patient was allowed to walk about the ward, the joint being kept stiff by light pasteboard splints. At the end of the eighth week motion commenced, and November 29th patient was discharged with 30° flexion, increasing every day from simply walking upon his leg. Patient is a professional base-ball player, and now runs well, feeling his leg to be as strong as ever.

CASE III. *Simple fracture of left patella from muscular action.*—C. R——, aged twenty-four, driver, entered Ward 10, October 9th. Operated upon twenty-four hours after injury. It was with some trepidation that I operated in this case so soon after the injury; but I looked upon it as a radical way to relieve the inflammation then commencing in the joint, and that it was successful is proven by the fact that when I removed the dressing at the expiration of twelve days, the circumference of the joint was four inches less than when the dressing was applied. In this case the lower fragment was very small and tilted, so that the broken surfaces were greatly at variance with each other. This class of cases, although not so pleasing to operate upon, are surely the most appropriate, as it is difficult to imagine a good result accruing from any treatment that would not direct the fractured surfaces in a measure toward each other. Treated in the ordinary way it is impossible to do this, the lower fragment being so small that one is unable to

obtain any purchase upon it. Two wires were introduced, and a mortise cut in the upper fragment to partly contain the lower, good apposition being obtained. The rupture in the capsule in this case was at least three inches, and was treated similarly to the others. As stated above, the case was dressed on the thirteenth day. Primary union of the skin was perfect. His temperature was once 101°, at all other times not above 99.5°. Patient allowed to walk about ward with knee kept stiff by splints at seventh week, and to-day, December 5th, they have been removed, and he is allowed to commence motion himself. There is no doubt but that he has good bony union.

The secret of success in these cases, and I think the remark is applicable to all surgery, instances of pure luck being excepted, is antiseptic surgery in the true sense of the term, and in detail especially. The reading of Mr. Lister's paper at the meeting of the London Medical Society, October 29th, immediately excited an active interest in the operation. The discussion of the paper by the society, November 5th (vide *Lancet*, November 10th), brought forward opinions from many surgeons for and against the operation. It is gratifying to notice, however, that those gentlemen who advocated the operation are those who practise antiseptic surgery. The unbelievers have not yet been converted. In *The Lancet* for November 17th appears a report by Dr. Wm. McEwen of four cases, all successful.

At the meeting of the London Clinical Society, November 9th (vide *Lancet*, November 17th), Mr. G. R. Turner presented a table of fifty cases, this table not including cases operated upon in his country. Of the fifty cases there were two deaths. In the same number of *The Lancet* is a fatal case published, occurring in the practice of Mr. John Wood. Antiseptic precautions are claimed to have been employed, yet a horse-hair drain appears to me to be insufficient for the purpose of drainage from a knee-joint. The reporter refers to the joint as being very tense at subsequent dressings. For the same reason I prefer a rubber to a bone drain, on account of the danger of the capsule cutting the tube or collapsing it.

Regarding the results from the old treatment of fractured patella, I do not consider them satisfactory. Many cases recover with fairly good function, but as many go about with weak, unreliable joints; and, whether it has been my particular experience to meet them, I have seen many examples of refracture of the bone, fracture of the opposite patella, rupture of the ligament, and other injuries resulting from falls due to an unreliable limb. Regarding the results following wiring, I believe bony union to be the rule, especially in recent fractures, otherwise a very close ligamentous union. Regarding the danger of the operation, and it should be the first consideration, I conscientiously believe it to be fractional, if the case is treated thoroughly antiseptically. It is proper, however, that I should leave the discussion of the ethics of the operation to such a man as Mr. Lister, and they are to be found fully analyzed in his most interesting paper.

SULPHATE OF SODA may be advantageously substituted for sulphate of magnesia. According to Fothergill, the soda salt acts on the liver, while the magnesia salt acts on the intestinal glands. It has the disadvantage of a more nauseous taste than the common salts. Dr. T. Curtis Smith, of Aurora, Ind., in the *Medical and Surgical Reporter*, recommends the following method of disguising the taste. Put a half ounce or an ounce of the *powdered* sulphate of soda in a gill of *hot* water, add to this twenty to thirty drops of arom. sul. acid. and an ounce or two of sugar. This is easily taken. This should be taken fasting—generally just after rising in the morning. It is useful whenever a cholagogue saline, so to speak, is indicated. Dr. Smith finds it useful in acute articular rheumatism occurring in plethoric subjects.—*Medical World.*

THE CURE OF URETHRAL STRICTURE IN ONE SITTING.

BY GEORGE M. SCHWEIG, M.D.,
NEW YORK.

WHEN, some years ago,[1] I published a description of a new stricture-dilator, I laid claim to nothing further than furnishing the profession an instrument which, for certain recognized and established purposes, was superior to any other then known. I was, at the time, myself unaware of the possibilities of the method when carried out in a more perfect manner than it had been with the instruments previously in use. It is only within the last year or two that clinical experience has taught me the facts that justify the title of this monograph. Be it understood, moreover, that the claim implied by that title is by no means intended to be universal. But while I freely admit that many cases of urethral stricture present collateral conditions that render it either difficult or inadvisable to pursue such a course, yet a very respectable majority admit of permanent removal at a single sitting without any appreciable risk of harm or injury.

Prior to the introduction of my instrument, "divulsion," or "forcible expansion," was a term synonymous with violence and more or less traumatism, accompanied frequently by very disagreeable accidents or sequelæ, such as shock, hemorrhage, laceration of mucous membrane, urethral fever, etc., and was always a painful operation. The results, moreover, were not such as to compensate for the attendant risks. As the lesser of two evils internal urethrotomy became gradually more popular. Those who have frequently practised this last, however, will admit that a mode of treatment which is painful, accompanied by hemorrhage, often of so alarming a nature as to tax the utmost skill of the surgeon to check; that, as a rule, confines the patient to bed for some days, confessedly requires more or less after-treatment, and withal shows a certain percentage of relapses, does not present a very acceptable substitute for even the crude divulsion of former days. My experience for the last five years (I have used my instrument since 1878) has only the more firmly convinced me of the truth of the statement made in the paper above referred to, that "dilatation carried to a *sufficient extent* is not only the *safest* method of treating the great bulk of cases of organic stricture, but the one which is at the same time the most likely to secure *radical and permanent results*."

In THE MEDICAL RECORD of August 2, 1879, I published a paper entitled "The Treatment of Urethral Stricture by Slow Divulsion." I am free to admit that I have almost entirely abandoned *slow* divulsion. If I had recourse to it at first it was for lack of boldness. It was because the experience with divulsion of others bade me be cautious. As I treated case after case, however, without any of the dreaded accidents occurring, I became gradually less conservative, until I was finally brought to realize that, performed with a proper instrument, rapid divulsion is as harmless a proceeding as passing a sound.

Now as to results. These are, so far as I have been able to judge, absolute, perfect, and permanent. I will not say that I have never failed. I did fail in one case last summer. It was that of a gentleman with an exceptionally large urethra. The largest instrument I possessed at the time dilated to 40 only. His natural meatus was 36. Urethral calibre a trifle above that. By dilating to 40 I did not obtain a *sufficient* degree of over-distention; hence the failure. The patient was anxious to leave town, and I had no time to get a specially large instrument made for him. I performed internal urethrotomy with Otis' instrument, obtaining at the time a urethra with a minimum calibre throughout of 36. The patient left for the West shortly after the operation. He returned a few weeks later for a stay of only a few days prior to his departure for Europe. There had

[1] MEDICAL RECORD, May 3, 1879.

then been some recontraction, although not much, at the site of the stricture. He wrote to me not long since to the effect that a slight urethral discharge that he had had right along still continues. I have no doubt that had I possessed at the time an instrument dilating to 44, the result would in this case have been as satisfactory as it was in all my others.

The one fixed rule to go by is to dilate to a *sufficient extent.* When it is borne in mind that the object is to destroy the continuity, or at least the resiliency of the stricture-fibres, it becomes obvious that to accomplish such a result with certainty the expansion must go, to some extent, *beyond* the normal urethral calibre; yet, if confined within proper limits, the distensible urethral walls will remain intact, and the traumatism be submucous, and limited to the unyielding stricture tissue.

I have dispensed with after-treatment altogether. An occasional bulb or sound for the purpose of observation within the first year completes the attendance, and even this I have thus far found superfluous. I will give a few aphoristic cases from private practice by way of illustration.

Case I.—A. S——, traveller, about thirty years of age. Saw him first January 5, 1882. Stricture in penile portion. Would not admit large dilator. Introduced small dilator and stretched to 32. January 7th, introduced large dilator. Stretched to 40. January 20th, passed a 28 sound (full size of meatus). Saw him again May 5th; passed 28 bulb; all clear.

Case II.—Mr. S——, collector, twenty-seven years of age. First examination August 18, 1882. Had gonorrhœa three years prior to that. Contracted meatus. Urethral discharge. Urethra unevenly strictured at from 4 to 6 inches. After some preparatory treatment, cut meatus and dilated strictures to 40, on September 17, Dr. Henry Herman assisting. Passed 33 sound after operation. Passed sound and 30 bulb several times by way of observation until November 1st. All remained well and discharge had ceased. I saw him recently. He had married, and had felt none of his former symptoms.

Case III.—J. J——, letter-carrier, twenty-seven years of age. Seen first November 9, 1882. Strictures at 2½, 5½, and 6½ inches, the two anterior ones exceptionally hard, unyielding, and resilient. After some preparatory treatment I introduced dilator on December 31st; dilated to 40. On account of the large amount of residual callus I gave him some after-treatment, consisting of sounds and electrolysis, to produce absorption. There was never any further obstruction. March 11, 1883, callus had wellnigh disappeared. April 1st, passed bulb 26, which came back unchallenged.

Case IV.—R. M——, merchant, thirty-five years of age. Had gonorrhœa seven years ago. First examination January 1, 1883. Found well-marked stricture at 4½ inches. By passing sounds of increasing size in rapid succession, I made way for dilator, and at once stretched to 40. January 6th, passed 27 sound. January 27th, passed 29 sound; slipped in easy. He called next July 17th, when on examination I found all as I had left it.

Case V.—C. H——, cattle-dealer, twenty-eight years of age. Called February 21, 1883. Found multiple stricture at from 5½ to 6½ inches, also contracted meatus. Next day, February 22d, cut meatus. March 5th, stretched strictured portion to 40. There was no after-treatment whatever. He left at once for his home in Montana. From late advices he remained well.

Case VI.—E. D——, salesman, thirty-five years of age. Examined July 2, 1883. Stricture extending from 5 to 5½ inches. July 3d, passed small dilator, stricture being too close to admit large one. Stretched to 32. July 5th, stretched to 40. July 6th, passed 28 sound (full size of meatus). Did not see him again until the beginning of November. Passed 26 bulb. All clear.

Case VII.—F. B——, merchant, fifty-five years of age. Called August 23, 1883, accompanied by his family physician, Dr. F——. Found contracted meatus, imperfect phimosis, and strictures at 1½ and 5½ inches. September 18th, operated for phimosis and cut meatus. Strictures being close, especially the posterior one, dilated with sounds at intervals of several days until wide enough to admit large dilator. October 12th, dilated anterior stricture to 38. October 20th, dilated posterior stricture to 40. October 30th, passed 31 sound. November 11th, passed 30 bulb and 31 sound. No recontraction.

Case VIII.—H. W——, merchant, twenty-seven years of age, from western part of New York State. Called August 26, 1883. Found stricture at 5½ and 6½ inches. Dilated at once to 40. Passed 30 sound (full size of meatus) August 27th, and again August 28th. He then left for home. Returned October 28th; passed bulb 26 and 30 sound. All clear. Called again November 25th. A like examination showed not the slightest recontraction.

Case IX.—Mr. R——, aged fifty-eight, from Albany, called September 22, 1883, accompanied by Dr. B—— of Brooklyn. Found stricture at 5½ and 6½ inches. Urethra highly hyperæsthetic. Put him on sedative treatment. He left for home and returned October 27th, again accompanied by Dr. B——. I then dilated to 40, followed with a 35 sound, which slipped to bladder by its own weight. He left at once for home. Came down again November 24th, no instrument having been passed meantime. Passed 33 sound, which slipped in without the slightest halt. There was no sign of a recontraction.

Now I am well aware that most, if not all, of the above cases are of too recent a date to warrant permanence of results. I give them merely to illustrate the feasibility of rapid divulsion with perfect safety. Still, I think I may justly expect *at least* as good results from them as have been obtained from those where *slow* divulsion has been practised; and as of this latter class I have had cases under observation for about five years without any relapse, I shall continue to believe, until I have evidence to the contrary, that the results obtained in the cases given are permanent. I may add here that not one of my stricture patients has been confined to bed for a single hour as the result of this treatment, and that not a single undesirable accident has occurred.

It may not be out of place here to say a word concerning the electrolytic treatment of stricture, more especially in that I have been quoted as a *quasi*-advocate of that method. I employ electrolysis for the removal of residual callus in persons of advanced years, or others where spontaneous absorption does not go on readily. As for galvanism removing or curing a stricture—while I do not desire to deny possibilities—I confess I have never had the patience to see a case through. At any rate, even if feasible in favorable cases, it would be taking a long, tedious, roundabout way to accomplish what can be obtained with infinitely more speed and certainty, and with less discomfort, by a short cut.

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American *versus* English Dental Education.—The President of the American Dental Society of Europe, at their meeting at Cologne in August, made the following remarks during a discussion on the causes of failure of gold as a filling material: "I am an examiner at one of the dental hospitals in London, and I have been surprised and pleased to remark the excellence of the operations made by the students. The skill in operating is accompanied, as you all know, by a most thorough theoretical knowledge. I have myself passed seven different medical examinations. The easiest of these was that for M.D. at the University of New York. My subsequent examinations for D.D.S. at the Philadelphia Dental College amounted to absolutely nothing; and I am convinced that the English system of education, combining, as it does, thoroughness both in theory and practice, must in the long run triumph over the American system."

THE MILD WINTER CLIMATE OF NEWPORT, R. I., AS THE EFFECT OF THE GULF STREAM.[1]

By H. R. STORER, M.D.,

PRESIDENT OF THE NEWPORT MEDICAL SOCIETY.

SEVERAL months ago I had somewhat to say in the *Sanitarian*,[2] and subsequently in the *Boston Medical and Surgical Journal*,[3] concerning the fitness of Newport for the residence during winter of delicate people and convalescents, who desired to avoid the inclemency and extreme changes of temperature of the main land at that season, and who did not care to have the fatigue, expense, uncertainty of comfort, and distance from home friends, of the journey to Florida, Bermuda, or the West Indies. The facts that I presented upon evidence, from personal and other medical testimony, and from meteorological and mortuary statistics, could not be gainsaid; the only criticism that was attempted having been to the effect that, however valid the facts, they conflicted with another person's preconceived theory. Since the dates of my previous communications, additional proof has been given by Mr. Ernest Ingersoll, of the very direct effect upon the Newport waters, and therefore upon its climate of the neighboring Gulf Stream, and to cite this may interest the readers of THE MEDICAL RECORD.

In speaking hitherto of the general effect of the gulf stream in this connection, I might have quoted the following, by Lorin Blodget, of Philadelphia: "Climates distinctly maritime, or directly controlled by adjacent water surfaces, exist in but few positions on the eastern borders of the continent. At Norfolk, Newport, Nova Scotia, and Newfoundland on the Atlantic coast, there are quite decisive maritime influences, particularly at or near Newport, and over most of the Nova Scotian peninsula; but these are due to unusual exposure and close proximity to the Gulf Stream."[4]

In one of my former papers I alluded to the absolute difference in the temperature of the sea-water north and south of Cape Cod, produced by the outward projecting of that promontory as an abrupt dividing line between the eastward flowing Gulf Stream and the inner and westward arctic current, and to the evidence of this afforded by the distinctly northern and southern character of the marine floræ and faunæ of these portions of the Atlantic coast. This fact seems first to have been intimated, in a general way, in reference to the geographical distribution of our coast-fishes, by my father in 1839, nearly fifty years ago.[5] A dozen years later, in 1852, Professor Harvey, of Dublin, in describing the sea-weeds of North America, indicated the following as the "regions of algæ into which the eastern and southern shores of the North American States may be divided:

"*First.*—Coast north of Cape Cod, extending probably to Greenland.

"*Second.*—Long Island Sound to the sands of New Jersey.

"*Third.*—Cape Hatteras to Cape Florida.

"*Fourth.*—The Florida keys and shores of the Mexican Gulf."

Of the first region, including Massachusetts Bay, "all the species," he said, "are arctic forms, confined in the European waters to very high latitudes, and all appear to vegetate nearly as far south as Cape Cod, to which limits they are almost all confined. The marine flora of this region as a whole bears a resemblance to that of the shores of Iceland, Norway, Scotland, and the north and northwest of Ireland." Of the second region, that of the neighborhood of Newport, "in comparing its plants with those of the first, a very marked difference is at once seen. We lose the arctic forms whose place is supplied by sargassum[1] (one species of which is the distinctive weed of the Gulf Stream), etc." Of the third region, some of whose forms are "tropical," "many of the species found within these limits are common to the second region."[2]

Twenty and twenty-seven years later, in 1872 and 1879, Professor Farlow, of Harvard University, was still more explicit in his statements. "As long ago as 1852," he said, and this I have already quoted, "when the first volumeof the 'Nereis Boreali-Americana' appeared, it was understood, in a general way, that Cape Cod was the dividing line between the northern and southern marine ora. The question has since been raised whether Cape Cod is as strictly the dividing line as Harvey had supposed; whether northern species do not occur at exposed southern points, as Gay Head and Montauk, and southern species wander northward to Cape Ann. Most decidedly, I think, such is *not* the case. None of the characteristic algæ of the north, with a solitary exception, are found south of Cape Cod."[3] To the above I might have added also from Professor Farlow, in a subsequent year, the following: "Cape Cod is the dividing limit between a marked northern and a southern flora. In fact the difference between the floræ of Massachusetts' and Buzzard's Bays, which are only a few miles apart, is greater than the difference between those of Massachusetts Bay and the Bay of Fundy, or between those of Nantucket and Norfolk. This difference in the flora corresponds precisely with what is known of the fauna. That Cape Cod formed a dividing line was known to Harvey, and subsequent observation has only shown, on the one hand, that the flora north of Cape Cod is more decidedly arctic than he supposed, and that, on the other hand, south of the Cape it is more decidedly that of warm seas."[4] That most of the more than one hundred species of sea-weed or algæ collected for the United States Fish Commission by Professor Farlow in the vicinity of Newport are southern or subtropical as compared with those of Massachusetts Bay, and almost none of them northern, shows that the difference in the temperature of the waters north and south of Cape Cod must, as has been said, be absolute. This difference must necessarily be a permanent one, and comparatively very nearly as decided during winter as in summer.

Of interest in this connection is the apparently accepted fact that the cold Labrador southward or shore current is less marked in winter than in summer, or descends beneath the surface during that season at a higher latitude, so that during winter the Gulf Stream itself is thus permitted a more northerly set, and its inner margin comes nearer than to the Rhode Island coast. This question is discussed at length, and charts are given of the summer (July) and winter (January) direction of the currents, by Petermann, of Gotha, in his very elaborate paper upon the Gulf Stream, and thermometrical knowledge of the Atlantic Ocean.[5]

It may be well, such is the great importance of this subject, not merely to students of the natural history of open sea, and to climatologists, but to all practising physicians, having as they do frequently to consider what are the most favorable localities for them to utilize for general and special purposes in the treatment of their patients, to present Professor Farlow's evidence as to the two floral regions above mentioned in even greater detail. "If we regard," he says, "the marine vegetation of the northeastern coast of the United States as a whole, we see that, beginning at Eastport, we have a strongly marked arctic flora, which is a direct continuation of that of Greenland and Newfoundland. As we proceed

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[1] Read before the Newport Medical Society, November 6, 1883.
[2] January 11, 18, 25, and February 8, 1883.
[3] March 29 and April 26, 1883.
[4] Appleton's American Cyclopædia, article Climate, vol. iv., p. 680, 1873.
[5] D. Humphreys Storer: Report on the Ichthyology of Massachusetts (concluding remarks). Boston, 1839.

[1] "A pre-eminently Southern species."—*Farlow.*
[2] Nereis Boreali-Americana. Smithsonian Contributions to Knowledge, vol. iii., article iv., pp. 26-27. 1852.
[3] List of the Sea-weeds or Marine Algæ of the Southern Coast of New England. Report on the Condition of the Sea-Fisheries of the South Coast of New England in 1871 and 1872. United States Commission of Fish and Fisheries, p. 281, 1873.
[4] The Marine Algæ of New England. United States Commission of Fish and Fisheries. Report of the Commission for 1879, p. 4. Washington, 1882.
[5] Mittheilungen, etc., 1870.

southward toward Boston, although the luxuriance of growth is less, the general appearance of the flora is still unmistakably arctic, if we except a few sheltered localities. As soon as we pass to the south of Cape Cod, however, the flora assumes an entirely different aspect. The Arctic and Northern Europe forms have disappeared, except at a few exposed points, and in their place we find a number of species characteristic of warmer seas." "The general fact," he continues, "of the distinctness of the two floræ is not weakened by the knowledge that we now possess, owing to the investigations of the Fish Commission, of the existence in a few sheltered localities north of Cape Cod of some of the characteristic species of Long Island Sound, and in a few exposed spots south of the Cape of northern species."[1] And again, "the marine flora of Southern New England is much like that of the Mediterranean."[2]

What has been stated by Professors Harvey and Farlow of the marine flora of the vicinity of Newport, has been shown to be also true of its marine fauna. Professor Verrill, of Yale College, has particularly referred to this in his "General Remarks upon the Habits and Distribution of the Invertebrate Animals of Southern New England Waters." "In prosecuting our explorations (for the United States Fish Commission)," he said, "we soon found that there are in the waters of this region quite distinct assemblages of animal life, which are dependent upon and limited by definite physical conditions of the waters which they inhabit." The first of these regions is that of the bays and sounds "along the coast from Cape Cod westward and southward," at the mouth of one of which Newport is situated. "These shallow waters consist of nearly pure sea-water which has a relatively high temperature, for it is warmed up both by the direct heat of the sun and by water coming directly from the Gulf Stream, and bringing not only its heat but also its peculiar pelagic animals. Owing to this influence of the Gulf Stream, these waters never become very cold in winter, for some of the small, shallow harbors never freeze over. The greater part of the animals inhabiting these bays and sounds are southern forms."[3]

In his recent article upon Professor Alexander Agassiz' laboratory or aquarium for research at Newport, in the September number of *The Century* magazine, Mr. Ingersoll corroborates Professor Verrill, and is even more distinct in his language. "There is found," he says, "to be a startling difference in the oceanic fauna north and south of Cape Cod. The bather who has tried the surf at Nahant and then at Newport needs no thermometer to understand the immense contrast of temperature between the two coasts. The reason is plain: into Massachusetts Bay pours the icy flood from Labrador and the berg-haunted Banks of Newfoundland, while the south shore is washed by the great tepid current from the tropics, which the Cape swerves off until it strikes straight out to sea to warm the Irish coast. North of Cape Cod one picks up on the beaches and dredges from the bottom of the bay few sea-animals (at least of invertebrates) except those of arctic habit, and these grow more abundant as he proceeds northward; while he misses dozens and dozens of species that he knows may be collected merely by crossing the narrow peninsula which has stood for ages in some shape, a barrier to the southward extension of northern forms, and to the northward travel of those animals whose home is in the southern seas."[4] And again: "This particular locality (Newport) is highly favorable to the study of marine zoölogy, because the jutting headlands on each side of the harbor make a funnel into which, twice a day, the entrapped tide drives the pure ocean waters fresh from the warm path of the Gulf Stream, bringing a harvest of living things that elsewhere along the coast remain far outside. Mr. Agassiz is therefore able to get, at the very door of his laboratory, a large series of thoroughly pelagic animals, which other naturalists (at least everywhere north of Hatteras) must go far afloat for, and would regard as wholly extra-littoral."[1]

Now, to those who may claim, however unreasonably, that the researches of Professor Agassiz and those of Professor Verrill have thus far been confined to summer types and species, and that the lower marine fauna of Newport, even to the molluscs, echinoderms, annelids, and sponges, may, like the higher forms, seals, porpoises, sea-turtles, and fishes, be but migratory in their character, and disappear as winter draws on—although, in point of fact, some of these vertebrates appear in greater number during this very season—it may be replied that the criticism cannot be true of a great many of the marine invertebrates studied by Professors Verrill and Agassiz, nor of that very large portion of the sea-weeds and mosses constituting the marine flora, which remain permanently attached to the rocks of their birth, and indeed are, some of them, in full fructification during the winter months. Since they are southern species, they would of course be destroyed were the water very materially chilled at any season of the year. It is well known that Newport's outer harbor and the mouth of Narragansett Bay are seldom or never frozen, even close along the shore. If, accordingly, the water thus keeps moderately warm, the atmosphere in contact with it must necessarily be favorably affected to a corresponding extent, and even if we grant that from the thermometric condition of the neighboring coast, and of the slightly brackish water of upper Narragansett Bay, twenty and thirty miles away, at Fall River and Providence, there is a tendency, during certain winds and at ebb-tide, to chill the waters of the lower Bay, it must not be forgotten that each incoming tide brings in a fresh supply of warmth from the never-failing source close at hand, the inward sweeping curve of the Gulf Stream, before it is deflected eastward by Cape Cod.

That the average winter climate of Newport is a very mild one, has long been known. That the temperature of its atmosphere during winter is raised through the warmth of its surrounding sea, has become a matter of evident demonstration. That its climate, in the truest sense, is to be called oceanic, can therefore no longer be denied.

From the meteorological data collected by the late Professor Henry, of the Smithsonian Institution, I have prepared the following tables. In each instance, it will be noticed, the evidence is from Government observers, whose instruments and methods of observation were presumably identical. The comparisons of the winter climate of Newport, with those of Boston, New York, and Philadelphia, are therefore the more reliable.

I. MEAN YEARLY TEMPERATURE. (Isothermal.)—The curve for Philadelphia passes near Sandy Hook, south of and parallel with Long Island.

Boston (Fort Independence, Castle Island), 48.76°, 26 years, during 1824–70.

Newport (Fort Adams), 50.14°, 19 years, during 1842–70.

New York (Fort Columbus, Governor's Island), 51.82°, 48 years, during 1821–70.

Philadelphia (U. S. Naval Hospital), 52.25°, 8 years, during 1843–69.

II. MEAN SUMMER TEMPERATURE. (Isotheral.)—The curve for Philadelphia passes to the ocean near Atlantic City.

Boston.....	68.47°	New York.....	72.64°
Newport	69.90°	Philadelphia .. ....72.44°	

III. MEAN WINTER TEMPERATURE. (Isocheimal.)—

[1] Loc. cit.: The Marine Algæ of New England, pages 3, 4.
[2] Loc. cit.: List of the Seaweeds, etc., of the South Coast of New England, page 282.
[3] Report upon the Invertebrate Animals of Vineyard Sound and the Adjacent Waters, etc. Report U. S. Fish Commission, pages 298, 299. Washington, 1873.
[4] Ernest Ingersoll: Professor Agassiz' Laboratory. The Century, September, 1883, page 728.

[1] Ibid., page 731.

The curve for Philadelphia passes near Sandy Hook and the eastern extremity of Long Island, close to Newport, and by the elbow of Cape Cod.

Boston	28.60°	New York	31.30°
Newport	31.46°	Philadelphia	32.25°

IV. Winter Monthly Averages.—

	December.	January.	February.
Boston	31.24°	26.85°	27.72°
Newport	33.63°	30.23°	30.53°
New York	33.50°	29.87°	30.53°
Philadelphia	33.26°	30.79°	[1] 32.71°

From the above it will be perceived: *First.*—That the difference in mean winter temperature between Boston and Newport, 2.86°, is nearly four times greater than that between Newport and Philadelphia, which is 0.79°; and that the mean winter temperature of Newport is 0.16° warmer than that of New York.

Second.—That while there is a difference of 2.39°, in the monthly average for December, between Boston and Newport, in favor of the latter, Newport is during that month warmer by 0.13° than New York, and 0.37°, an even larger fraction, warmer than Philadelphia.

Third.—That the difference in the monthly average for January, between Boston and Newport, 3.38°, is six times greater than that between Newport and Philadelphia, and that during this month Newport continues warmer than New York by 0.36°, a third of a degree.

Fourth.—That in February, the coldest month of the year in a great many places, the monthly average for Newport is higher than during January; that it is now precisely the same as that of New York for this month; and that the difference between the averages for Boston and Newport for February, 2.81°, is greater by nearly a degree (0.63°) than that between those for Newport and Philadelphia, 2.18°, although the latter of these places has already begun to feel the influence of approaching spring.

Fifth.—In other words, that while the isotheral, like the isothermal line of Philadelphia, passes to the southward of Newport, their isocheimal or winter curves but slightly vary.

In view of the above, and the peculiar equability and "softness" of the Newport climate, of which I have elsewhere given evidence, it is not perhaps too much for me again to claim that Newport is better adapted, all things considered, than any other point upon the northern coast, and perhaps than any other in the Northern States or Canada, for the residence of delicate persons and invalids during fall and winter, as can easily be determined for himself by any physician who will take the trouble to visit the place at those seasons, or to put himself in correspondence with any of the following members of the Newport Medical Society: Drs. Francis, Rankin, Rives, Barker, J. P. and P. F. Curley, News, Sears, Wheeler, Goddard, Angell, Hurley, Dyer, Mason, Powell, and Fisher; or with Drs. Turner, Engs, Odell, Birckhead, and Brackett, also of Newport, or Drs. Argyle Watson and W. D. McKim, now of New York City. As to the advisability of Newport for invalids at other seasons of the year, evidence will doubtless willingly be given by Drs. Marion Sims, E. S. F. Arnold, Cleveland, Roosa, J. C. Peters, Beverley Robinson, Weir Mitchell, Stearns, and many other New York, Philadelphia, and Southern and Western physicians who have had personal experience of its curative effects. To Dr. Sims is undoubtedly due the credit of having commenced the sanitary agitation at Newport, which has given the city a better water supply, and will soon result in perfected sewerage, and a general conformity by hotels, boarding-houses, and dwellings for lease, to the requirements of modern hygiene.

The question is often asked as to what quarter of Newport is best suited for winter residence? My reply is always unhesitatingly, "the Point," and this not merely because it best suits my own taste for quiet and yet accessibility to the centre of the town, and that it is the only shore whence the use of boats is possible in all weather and at all seasons of the year, and that as the residence *par excellence* of Philadelphians, especially of Germantown people, during the summer, it is becoming better appreciated with every year, but it is completely sheltered from easterly weather. The drier northwest winds are temperable by a furnace and outer sashes; easterly winds, even the comparatively mild ones of Newport, are not to the same degree.

That the writer sought Newport as an invalid six years ago, and solely for its winter climate; that he has remained there, partially convalescent, but in far better health than theoretically he could ever have hoped to regain, and that he is no longer in active practice, may possibly render his opinion, as to the advantages of the place as a winter health resort, of the more weight with the profession.

As the result of the present inquiry, it may be seen that, despite the theoretical assumption sometimes urged, that the main Gulf Stream lies too far off shore from Newport to exert any real influence upon it—

I. The southern character of both the fauna and flora of Newport prove the immediate proximity, presence, and direct influence of the warm waters of the Gulf Stream; and that—

II. The contact of its atmosphere during winter with this relatively warm sea produces a sensible modification of the local climate of Newport to such an extent that, already insular, it becomes, and even more distinctly than its favorable thermometric averages would imply, truly oceanic as compared with that of the neighboring mainland coast.

[1] Schott: Tables, Distribution and Variations of the Atmospheric Temperature in the United States, etc. Smithsonian Contributions to Knowledge, vol. xxi. 1876.

Progress of Medical Science.

The Seventh Sense.—Sir William Thomson, Professor of Mathematics in the University of Glasgow, in a recent address, broached the idea of the existence of a magnetic sense. This sense he called the seventh sense, to distinguish it from our other six senses—namely, those of sight, hearing, taste, smell, heat, and force. He said that, in speaking of a possible magnetic sense, he in no way supported that wretched grovelling superstition of animal magnetism, spiritualism, mesmerism, or clairvoyance, of which they had heard so much. There was no seventh sense of a mystic kind. Clairvoyance, and so on, was the result of bad observation chiefly, somewhat mixed up with the effects of wilful imposture, acting on an innocent and trusting mind. If there were not a distinct magnetic sense, it was a very great wonder that there was not. The study of magnetism was a very recondite subject. One very wonderful discovery that was made in electric magnetism was made by Faraday, and worked out very admirably by Foucauld, an excellent French experimenter, showing that a piece of copper, or a piece of silver, let fall between the poles of a magnet, would fall down slowly, as if through mud. Was it conceivable that, if a piece of copper could scarcely move through the air between the poles of an electric magnet, a human being or living creature, in the same position, would experience no effect? Lord Lindsay got an enormous magnet, so large that the head of any person wishing to try the experiment could get well between the poles; and the result of the experiment was marvellous, the marvel being that nothing was perceived. Sir William Thomson, however, was not willing to admit that the investigation was completed. He could not but think that the quality of matter in the air which produced such a prodigious effect on a piece of metal, could be absolutely without any

perceptible effect whatever on a living body. He thought the experiment worth repeating; and it was worth examining whether or not an exceedingly powerful magnetic force was without perceptible effect on a living vegetable or animal body. His own speculations had led him to conclude that there might be a seventh or magnetic sense; and that it was possible an exceedingly powerful magnetic effect might be produced on living bodies that could not be explained by heat, force, or any other sensation.—*British Medical Journal*, October 13, 1883.

MALIGNANT TUMOR OR TUBERCULOSIS OF THE TESTIS.—Mr. Butlin, in the *Medical Times and Gazette*, records two cases where tuberculosis of the testicle was mistaken for cancer. In both cases there was a rapid enlargement of the body of the testis, perfectly smooth, oval, and firm, without any sign of inflammation, characteristics which pointed to the presence of a malignant tumor rather than to a tuberculous testicle. Mr. Butlin, however, points out that the absence of elasticity is a great point in favor of the tumor being non-malignant. Another feature worthy of notice is, that in both cases the tumor was punctured, and yielded bright blood, which very quickly ceased to flow, and the hemorrhage was not subsequently renewed. In conclusion, the author remarks that the diagnosis in a difficult case will often rest chiefly on the importance attached to one or two symptoms, among which sufficient weight has not been given to the unequal consistence, and especially to the elasticity of the tumor.

DESQUAMATION OF THE INTESTINAL EPITHELIUM.—In his lectures on general pathology, Cohnheim considers the separation of the epithelium from the intestine in cholera to be entirely a post-mortem phenomenon. Virchow protests strongly against this view, insisting that exfoliation of the epithelium of the small intestine not only occurs during life, but that sometimes during life the exfoliated epithelium is evacuated. This occurs not only in cholera, but in spotted fever, and sometimes in typhoid. In reference to these observations of Virchow, Boehm (*Virchow's Archiv*, vol. xciii., 1883,) notes that a similar desquamation of the epithelium may be produced during life by the administration of poisons. It occurs in acute arsenical poisoning, and in poisoning by substances of the muscarin group. The animals in which this phenomenon is best observed are cats, which, after injection of muscarin or similar substances, exhibit choleraic symptoms, vomiting and purging, the motions being at first fecal, and afterward white and slimy; the slimy masses consist partly of isolated epithelial cells and partly of epithelial tubes like the fingers of a glove. In arsenical poisoning the epithelium undergoes peculiar alterations within the intestine; the body of the cell swells up to a hyaline ball, the margin splitting into the form of small cilia, cells thus altered looking very like flagellate monads, from which they are distinguished, however, by the absence of motion, and by the fact that all the intermediate forms, from an unaltered intestinal epithelial cell to a ciliated ball, can be seen together in a single field.

THE ETHER DOUCHE OR LAVEMENT FOR LOCAL PAIN.—In the *Medical Times*, September 8, 1883, Dr. C. H. Hughes says: A recent paragraph, referring to the ether spray in the cure of neuralgia, prompts me to call attention to the fact that ether lavements have been employed by me in all painful surface affections for many years, whether with or without inflammation, but mainly in neuralgic affections. In facial, sciatic, and cervical neuralgias, no remedy except galvanism has given me such signal satisfaction during the past ten years of my practice in neurology. These lavements will cure some cases of recent origin; they will relieve all. I use the ether douche, not the spray, and Dr. McLane Hamilton is in error in his reference to my treatment of the intense pain of cerebellar abscess by ether spray. In the case referred to, which I reported in 1877 (*Journal of Mental and Nervous Diseases*, October), I simply poured the ether on the head so copiously as to benumb all sensibility and restore a state of ease and mental tranquillity to a patient absolutely maddened with pain. The ether douche or lavement in trigeminal neuralgia is quite uncomfortable to many persons, on account of the unpleasant impression of the ether on the nose and eyes; and when applied to the supra-orbital region great care should be taken to keep the ether out of the eyes by laying the head back and covering the eyes with a handkerchief. If the ether should get in the eyes, the patient should be cautioned not to rub them, but simply to sponge the eyes with cold water and wait patiently till the ether evaporates. The same is true in regard to ether getting in the ears. There is no need of a spray apparatus for ether. It should be used freely, in quantities adequate to the effect desired. It should be poured on the part till relief is obtained. I apply it in this way to the motor regions of the head and down the spine in general or unilateral chorea likewise. No better agent can be employed for cephalalgia and for acute muscular tremor than the ether douche or lavement. Of late years I have heard of the ether spray, but the ether *douche* or lavement has been with me a most common and efficient agent in the local therapy of pain, especially superficial pain, for more than a decade, ranking with electricity, and better than mechanical vibration.

PARALDEHYDE AS A HYPNOTIC.—Paraldehyde has during the past year been made the subject of occasional contributions from various sources to the journals. Its introduction as a drug is due to the Italians, and especially to Cervello, of Palermo, and Morselli, of Turin. The medicinal dose is from thirty minims to two fluidrachms. Dr. J. C. Wilson has found a drachm to be the average dose for an adult under ordinary circumstances. It is to most patients disagreeable, and must be administered with a considerable draught of water. The taste and odor are ethereal and penetrating. Patients complain of this taste several hours after taking it, and it may be recognized by its odor in the breath. It is probably eliminated unchanged by way of the lungs. Dr. Wilson has prescribed it in nine cases, with a view to its influence as a pure hypnotic. In one hysterical patient it acted well for a short time, but lost its effect, and was discontinued. In a patient who could not sleep, after having acquired the habit of watching an invalid at night, it procured prompt and refreshing sleep. In a lady rendered sleepless by a sudden and appalling bereavement, it caused sleep, but was abandoned on account of the nausea which followed its administration. A gentleman who had sleeplessness and great mental depression after a debauch, and who failed to sleep for several nights after reasonable doses of the bromides and chloral, took a drachm of paraldehyde, and slept seven hours, waking refreshed and hungry. On the next day, this patient, being disturbed after he had taken it, failed to sleep, but succeeded in sleeping on taking a second dose. The other cases were sleeplessness from ordinary causes, and were all more or less fully relieved. It appears to speedily require an increase of the dose. Dr. Wilson ventures to express the personal view, that paraldehyde will prove a useful addition to our sleep-inducing drugs, but will supersede neither chloral, which it resembles in its effects, nor any others among them. It is, like new products of the chemical laboratory, at present expensive. There is no reason why a demand for it should not cheapen it.

ON LEAD POISONING.—Harnack came to the conclusion from his experiments that lead was a muscular poison, causing a peculiar loss of irritability of the muscular substance, so that when a muscle was subjected to the action of stimuli at regular intervals, it responded by very unequal contractions, which were sometimes large, sometimes small, and sometimes entirely absent, al-

though the stimulus was of equal strength in each case. A number of experiments have been made by Von Wyss (*Virchow's Archiv*, vol. xcii., 1883) on this subject, and he finds that lead tri-ethyl causes in frogs restlessness, quivering of the whole body, and loss of spontaneous movement, followed by loss of reflex action. The result was exactly the same as that obtained by Harnack, but the author thinks that it is simply that of complete paralysis of the central nervous system. At this time the muscles of the body were readily irritable, and continued to be so for several hours. After twenty-four hours, when the animal was entirely dead, the muscles presented a peculiar whitish discoloration and stiffness. This appeared earliest, and was most intense in the neighborhood of the injection, and presented the greatest similarity to a weak caustic action, while the general action on frogs was exactly that observed by Harnack; the author could not find any marked evidence of muscular paralysis. The muscles become paralyzed at a very late period after poisoning, and no difference could be detected between the irritability of a poisoned muscle and one from which the poison had been excluded by ligature of the afferent artery. These experiments, therefore, appear to show that lead has no special affinity for the muscles, and is not to be regarded as a muscular poison. On the other hand, the acetate of lead triethyl is a powerful poison for frogs, and appears to paralyze the central nervous system. When lead is administered to frogs internally in increasing doses the animals die with epileptic convulsions. These facts appear to indicate that lead has a tendency to affect the central nervous system rather than the muscles, and that the cause of lead-poisoning is to be sought in an affection of the nervous system rather than of the muscles.

Local Anæsthetic Action of Chloroform.—Dr. Heusner writes, in the *Deutsche Medicinische Wochenschrift* of October 31, 1883, concerning a little procedure adopted by him to facilitate the local application of chloroform for the relief of superficial pains. Although chloroform will be absorbed in greater or less degree in whatever way it is applied to the skin, yet its irritant action is much less marked and its anæsthetic effect equally as great if it can be applied only in the form of vapor. To obtain this mode of application easily and without any waste of the drug, the author had made some shallow cups of tin, curved in such a way that they might be applied closely to the skin of the face, trunk, or extremities. To render them air-tight when on the skin, the rims of the cups were provided with rubber edges. To the outside was attached an elastic band, to retain the cups in whatever position might be desired, and inside was fastened a pledget of lint. When used, a few drops of chloroform are poured on the lint and the cup then inverted over the painful part. A sensation of tingling and warmth is first felt, which soon passes on to pretty severe burning, while the original pain becomes more faint. A moderate pain may be entirely cured, and even very severe pain is rendered quite tolerable. Dr. Heusner has used this mode of application successfully in pleurodynia, dry pleurisy, gastralgia, earache and headache. It is of little use, however, in deep-seated pain, and often the worse forms of neuralgia are uninfluenced. Instead of the specially made cups a simple wine-glass will answer the purpose. The applications should not be too long continued for fear of causing vesication.

A New Method of Treating Chronic Rheumatism by Electricity.—Professor Seeligmüller claims to have met with remarkable success in the treatment of chronic articular rheumatism by electricity. He uses a metallic brush electrode with stiff wires, which he connects with the negative pole, the positive pole being attached to a flat sponge electrode. The latter is dampened and placed on the limb near the offending articulation, then the metallic brush is applied over different parts of the joint, being held in contact with the integument in each place for the space of from one to ten seconds. The application is very painful, but the professor remarks that the patients soon grow used to it. After a sitting the skin is covered all over with little dots, looking as if the Baunscheid instrument had been employed. The mode of action, the author does not explain, but thinks it cannot be entirely owing to the counter-irritation, for he has used other equally severe cutaneous irritants without meeting with anything near the success obtained by this method. One patient, who had been treated for eight years for chronic rheumatism by all sorts of methods, was able, after the first application of electricity, to raise his arm, which had been powerless for six months; after the third application all the movements were normal. Another man was unable to move either his wrist or his shoulder, owing to rheumatism, and after five sittings was discharged as cured, and was able to resume his work as a stone-mason.—*Deutsche Medicinische Wochenschrift*, October 17, 1883.

Angina Pectoris as a Symptom.—In a recent clinical lecture, Dr. Landouzy (*Le Progrès Med.*, 1883, Nos. 35 and 36); reminded his hearers that angina pectoris should not be regarded as a morbid entity. Like epilepsy, it is not an autonomous disease, and, like it, there is no such thing as angina pectoris as a unity. No doubt there is a dramatic completeness about an attack of this affection: retrosternal pain, anxiety, painful immobility, pallor, cold sweat, painful irradiations down the cervical and brachial nerves. This completeness attracts the attention of the patient and physician, so that it has come to be regarded as always presenting the same characters and bearing the same grave prognosis. But this involves an error, not only doctrinal, but of great practical importance. Just as there are epilepsies which depend on this or that condition, more or less transient or amenable to treatment, so there are anginas which may be due to transient or curable conditions. This form of purely nervous angina is well attested, but deserves to be better known. These patients have more to complain of than to fear; the angina is one of the numerous phases of their neurosis, which may depart after a time never to return, is never dangerous to life, and depends on a mere functional derangement of the nervous system. In another type, the occasioning causes are obscure, irregular in their effects, and instead of the kind just related are usually a little fatigue, an emotion, or some slight digestive trouble. No doubt, there is some pathological element which determines the occurrence within one minute of an attack which was absent a minute before. But this is often hard to define, as such attacks may come on when the patient is in perfect repose, sometimes in bed, and often during the first sleep. It may sometimes happen that a patient with some slight cardiac lesion, who is also nervous, may have angina, which should be ascribed rather to the neurotic temperament than to the cardiac lesion. Thus Mme. K—— had a slight aortic obstruction; but after the menopause she became decidedly nervous, with sudden attacks of flatulence, outbursts of laughter and tears, œsophageal spasm, neuralgia, transitory paraplegia, palpitations, asthma, loss of memory, difficulty of articulation, slight convulsive seizures, etc. Upon these supervened an attack of angina, which, in virtue of her cardiac lesion, was alarming. The aortic lesion under treatment appeared to improve; but the neurasthenia increased, diabetes supervened, and then new attacks of angina appeared, and these were regarded as rather the results of the neuropathy than of the cardiac condition; and she was told that they were no more dangerous than the asthma, palpitation, neuralgia, etc., which had so long troubled her.

A New Code Society has been organized in St. Louis, Mo. It is called the Pathological Society.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 22, 1883.

THE PATHOGENY OF RICKETS.

WE are indebted to the philosophical treatise of Bouchard on "Diseases Due to Retardation of Nutrition,"[1] for one of the best expositions yet given of the pathogeny of rickets.

Rachitism may be defined as an anomaly of nutrition in the child giving rise to an excessive growth of the osseous tissues, with imperfect calcification of those tissues; this entailing as a consequence temporary or permanent deformity of divers parts of the bony framework of the body. Rickets was for the most part unknown in Europe till the sixteenth century, and even during this epoch but one well-pronounced case is reported, and that by Theodosius in 1554, of a child, seventeen months old, which presented the characteristic deformities of the vertebral column and ribs. This appearance of rachitism in Europe just after the first great outbreak of syphilis, gives some support to the thesis so ably maintained by Professor Parrot (though on the whole not consistent with all the facts), that rachitism is always a manifestation of hereditary syphilis. Coming down to the seventeenth century we find the classic description of Glisson, bearing date 1650, and abundant evidence that the disease was prevalent in Switzerland, France, Holland, and Germany, as well as in England.

Many opinions have been advanced as to the nature of this disease; some authorities, as Portal, regard rickets as common to these four diatheses, syphilis, scurvy, scrofula, and gout, of any one of which it may be a manifestation. Hufeland ascribed it to scrofula, Boerhaave to syphilis; Glisson considered it as identical with osteomalacia, an opinion supported by Trousseau, though ably combated by Virchow.

Rachitism exists in all parts of the world, but is especially frequent in cold, damp climates. It develops preferably in houses deprived of pure air and sunshine, and hence is more known among the poor than among the rich, and is especially a disease of crowded cities. It manifests itself during the period of first dentition. Very frequent between six and thirteen months, its frequency diminishes between the ages of one year and five, and it is rare at puberty. Glisson was the first to remark the influence of defective alimentation on what he considered the osteomalacia of infants. Premature weaning is assigned as the principal cause by Petit, and too long deferred weaning by Zeviani. The experiments of Guérin have often been appealed to in explanation of the pathogeny of this affection, this experimenter having succeeded in rendering dogs rachitic by feeding them exclusively on meat. It has also been sought to establish experimentally the influence of an alimentation poor in phosphate of lime; Dusard, Wegner, and others have thus succeeded in producing rachitic deformities in animals, recognizable by their histological lesions. The experiments of Heitzmann and Tessur go to show that the ingestion of lactic acid by animals whose food is poor in phosphates favors rachitism. Thus far one of the essential elements of rachitism is grasped, the lack of phosphate of lime in the ossifying tissues, but no explanation is given of the increased formative activity of the bony medulla. Bouchard believes it to be the consequence of the failure of calcification; the protoplasmic elements finding themselves no longer imprisoned in their calcareous envelope, are free to proliferate luxuriously.

Too prolonged nursing, premature feeding of the suckling with meat or potatoes, are conditions which may be attended with imperfect supply to the growing organism of lime and even of phosphates. Insufficiency of acidity of the gastric juice, excess of alkalinity of the intestinal juices by diminishing the solubility of phosphate of lime or favoring the precipitation, oppose the absorption of this salt. The use of the salts of lime, lime water, calcic carbonate (so much employed in the therapeutics of infantile complaints), has certainly the effect, judging from the experiments of Kletzinsky and Rehn, to prevent the absorption of phosphates in any notable proportion, and increase their elimination by the fæces.

In this question of phosphate of lime and its fixation in the anatomical elements, it will not do to lose sight of this particularity, that in all probability the phosphate of lime utilized does not enter the economy in the state of phosphate of lime. The lime penetrates on the one part, in the condition of chloride, or in combination with a vegetable acid, for in the form of phosphate only minute quantities can be absorbed; the phosphoric acid enters the circulation as an alkaline phosphate, or very probably, as Bouchard thinks, as phospho-glyceric acid. But if the theory of Bencke is true, if the phospho-glyceric acid is generated in the duodenum and absorbed in the intestine, its production demands the concourse of numerous circumstances and almost complete integrity of all the digestive functions, for it supposes a high degree of acidity of the gastric juice, a notable alkalinity of the intestinal juices, and integrity of the biliary and pancreatic secretions.

The different steps in the formation of this complex organic acid are probably as follows: ingestion of fat and ingestion of soluble or insoluble phosphates; setting free of a part of the phosphoric acid of the phosphates by the hydrochloric acid of the gastric juice; emulsification, then breaking up of the fatty substances under the influence of the pancreatic ferment; production of glycerine, which combines in the nascent state with the free phosphoric acid. If the phospho-glyceric acid thus formed in the intestine combines later with lime in the recesses of the organism to form the phosphate of lime of ossification, it is at once seen that the question of pathogeny is removed from its once supposed basis, and that we are not so much concerned with the ingestion of phos-

[1] Ch. Bouchard: Maladies par Ralentissement de la Nutrition. Paris, 1882.

phate of lime with the food, or with its faulty elaboration, as with the divers physiological processes by which phospho-glyceric acid is produced in the alimentary canal. If now rachitic children ingest enough of fat, and even of alkaline phosphates, and even if the acidity of the stomach be sufficient, it is too often the case that they become sufferers from digestive troubles, the result of too rich food or a diet unsuited to their time of life, and that as a consequence of such faulty alimentation lactic acid predominates over hydrochloric acid in the stomach, a condition not favorable to the setting free of phosphoric acid; moreover, the alkalinity of the intestinal secretions may be insufficient, or these secretions may even be acid; a circumstance unfavorable to the decomposition of fat and the production of glycerine.

There are in rachitic persons other circumstances which interfere with the union of lime and phosphoric acid in the ossifying tissues, and the precipitation of this salt in the bone-forming cells. There are acid conditions of the blood which keep the phosphate of lime in solution, or cause it to be dissolved again after it has fixed itself in the cells. The fluids of rachitic patients are acid in a marked degree, and the peccant element has generally been found to be lactic acid, though acetic, formic, and even oxalic have been detected. What is the cause of this excessive acidity of the "humors" of rachitic patients? The solution of this question leads us deeply into the mysteries of nutrition and denutrition, of which we are just beginning to learn some facts. In a given time a healthy man completely transforms a determined quantity of organic alimentary matters, which, by successive steps of digestion and nutrition, pass in downward metamorphosis to the state of carbonic acid, water and urea. If during the same time only a lessened quantity of organic material can be completely oxidized, or if the same quantity is brought down only to inferior or intermediate degrees of metamorphosis, and if the various emunctories are called upon to eliminate not merely water and carbonic acid, but organic acids, fixed or volatile, not merely urea, but an excess of uric acid and of extractive matters, then we have retardation of nutrition, with all its attendant evils.

This nutritive languishment may result from insufficiency of alimentation, or from excess; in the latter case the blood becomes charged with imperfectly elaborated materials. It may also result from hygienic influences, which interfere with and retard respiration and circulation, and thus lessen the activity of the nutritive metamorphoses. Under these circumstances, the organic acids are not burned, the alkalinity of the fluids of the economy diminishes, uric acid augments in the urine, and the urates are more readily precipitated, and oxaluria supervenes. In these cases volatile fatty acids are eliminated by the sweat and perspiration. The histological integrity of the tissues is altered by the fact of the too ready solution or the imperfect fixation of the mineral ingredients which constitute the framework of the anatomical elements. The whole organism suffers, certain tissues more especially, and among these the osseous tissues.

Among the circumstances which favor this retardation of nutrition, it is needless to say that confinement in impure air, such as results from residence in damp, shady, and ill-ventilated tenements, and want of outdoor exercise, are especially influential.

In its application to the disease under consideration, this fact of retarded metamorphosis explains why the *best fed* children as well as the *poorest fed* sometimes become rickety, as alimentary principles may be imperfectly digested, and fail to be appropriated, or the forces of denutrition may predominate over those of assimilation, as a consequence of alteration of the fluids of the economy entailed by some serious hygienic vice.

A field of profitable inquiry is opened by these considerations, which Bouchard improves by showing how other diatheses, as gout, rheumatism, glycosuria, are explicable by facts pertaining to retardation of nutrition. Pathologists have hitherto been too exclusively occupied with one side of the question of nutrition—that pertaining to the primary digestion, to assimilation, to organization. Therapeutics has been fruitful in suggestions as to the supply of nutritive principles believed to be wanting, and feeding and dosing has been believed to be the chief end of the physician.

There is another and no less important side—that of denutrition, of destructive metamorphosis, of waste, which is destined in the coming years to have more prominence, and to be more studied.

HOSPITAL SATURDAY AND SUNDAY.

CONSIDERING the preparations that have been made the coming week for the reception of Hospital Saturday and Sunday funds, and the conveniences that have been offered to that end in the admirable systematic distribution of the yellow boxes, the promises are good for a large contribution. At least there will be no excuse for even the humblest giver that ample opportunities are not afforded for the display of charity toward the sick and suffering poor in our hospitals.

No form of charity appeals more directly to the public sympathy than that which insures for the man stricken by disease or the victim of accident, the proper help in time of direst need.

The public are being gradually educated to the point of understanding how necessary it is to support the hospitals that are always so ready to help the sick poor. On the part of the hospitals, also, there is a commendable rivalry to do their utmost in that direction. It is indeed a matter of ambition, which cannot be too highly appreciated, to show a large list of urgent charitable cases that were promptly and efficiently cared for. Willing to encourage this disposition, the Hospital Committee has wisely decided to distribute the funds collected in proportion to such work done.

As we have said on previous occasions some of the hospitals on the list are running in debt on account of their free-heartedness, and the managers and other friends of these institutions bear the brunt of the deficiencies by personal donations. This certainly should not be allowed by a public capable of appreciating good intentions and of encouraging true charity.

The hospitals belonging to this Association have altogether over one thousand free beds for the use of poor patients. Even this number falls far short of the actual

requirements of a great city in which the population of the sick poor is very large, and in which the chances of sudden accidents are proportionately increased. It is really the poor who are oftener sick, and who are more frequently the victims of accidents. They are the emergency cases which must be provided for at all hazards and without question as to expense. If the hospitals stand ready to bear the burden and render necessary help besides, they should not be allowed to become pecuniarily embarrassed. But it is only necessary to bring these facts to the notice of the public to invite liberal responses. There is a reasonable promise that the auxiliary associations, of which there are now several, will do good work. Each dollar subscribed by these auxiliaries will insure for each sick member one day's treatment in hospital. Under such an arrangement any trade society of large membership can care for all its sick poor without any extra expense.

The wide distribution of collection-boxes gives opportunity to all. Even the humblest contributor can drop in his mite, and feel that he is doing as much in his way as the millionnaire whose charities, disproportionately small, are often proclaimed from the house-tops.

PREMATURE SURGERY OF THE LUNGS.

We noticed recently the pulmonary experiments performed on dogs by Biondi, whereby it was shown that considerable portions of one or both lungs could be removed with impunity, and, even when one entire lung was extirpated recovery was as much the rule as the exception. Indeed, Dr. Biondi seems to think that the operation *per se* is attended with but little, if any, danger, for he remarks that his failures were attributable chiefly to the neglect of antiseptic precautions.

But we do not stop with dogs. The term pulmonary surgery already sounds familiar in our ears, and the reports of operations upon these vital organs in the human subject are appearing with increasing frequency in various journals, especially in the continental periodicals. In the *Deutsche Medicinische Wochenschrift* of July 18, 1883, is an account of an operation by Dr. Kaczorowsky upon a young girl who presented signs pointing either to an empyema discharging through a bronchus or to a cavity formed from bronchial dilatation. A portion of the sixth rib was removed, and through the opening thus formed the operator introduced his finger, pushing it through the lung-tissue until the cavity was reached. This was washed out and drainage established. Some improvement followed, but owing to a number of unfortunate circumstances the wound in the lung closed, and a reaccumulation of pus in the cavity occurred. The parents of the child objecting to a second operation, Dr. Kaczorowsky dismissed the case, and was unable to report upon the ultimate result.

In a journal published in this country, the *Medicinisch-Chirurgisches Correspondenz-Blatt* for September, 1883, is contained a notice by Dr. Proegler of two instances of cauterization of the walls of a cavity, performed by Koch. The first case was that of a man with an enormous cavity in the lower lobe of the right lung. After resection of a portion of the sixth rib, the thermo-cautery was passed through the lung-tissue into the cavity, the walls of which were then carefully cauterized. Some improvement in the quality and quantity of the expectoration resulting, the operation was repeated in four days, this time a piece of the eighth rib being removed. It was Koch's intention to operate a third time, but the patient meantime had died. The second case was that of a woman, who presented a cavity the size of a fist in the upper lobe of the right lung. The operation was performed as in the preceding case, and the patient was said to be greatly improved. Unfortunately, she died of septicæmia at the end of a week.

May we not express the hope that these examples will not be generally followed, at least for the present, for the measure of success thus far met with is not such as to give much encouragement to others. It would certainly appear preferable to let the poor consumptive end his days as peacefully as may be permitted him, rather than to subject him to the pain and distress of a formidable surgical operation, with a fair prospect of cutting short the few remaining weeks or months that might have been his on earth.

There certainly seems need of further experimentation upon animals before the human lung shall be considered a legitimate field for the exploits of the surgeon. And these experiments should be genuine efforts to relieve diseased conditions. Because a healthy dog will survive the removal of a part or the whole of one lung, it by no means follows that a like result is to be anticipated in the case of a man whose lungs are infiltrated with tubercles and whose vital power is already greatly reduced. When it is found that an animal with tuberculosis can be cured, or even greatly benefited, by the cauterization or exsection of the diseased pulmonary tissue, it will then be time enough to make cautious attempts in the same direction upon the lungs of the human subject.

THE EXTENT TO WHICH A MEDICAL EXAMINATION CAN BE FORCED BY LAW.

An interesting case, touching the extent to which a medical examination of the person can be forced for the purpose of obtaining testimony to be used in court, has recently been decided in the northern part of this State. The plaintiff, a lady, sued the Ogdensburgh and Lake Champlain Railroad Company for injuries said to have been incurred in a collision by reason of the negligence of the company and its employees. The defendant claimed that no serious injury was received by her, and that she was either feigning sickness or was suffering from a disease not caused by the alleged accident. In order to carry out this theory of a defence, the railroad company obtained an order requiring her to submit to an examination of her person by three physicians selected by the company, under the direction of a referee. The order also provided that such other physicians as the plaintiff desired, might be present at the examination, and that she should answer such questions as the physicians chosen by the company should put to her regarding her sensations and feelings at that time.

The plaintiff appealed from this order, and it was reversed by the higher court in an opinion, some parts of which are of interest and are as follows: "It is undoubtedly true that not unfrequently plaintiffs suing for

bodily injuries, do exhibit in court the injured part. Nor do we know of any reason why they should not do this, notwithstanding the exhibition may excite sympathy. And on the other hand, all unreasonable concealment of an injured part (not justified by any dictate of modesty or otherwise) may excite a doubt in the mind of the jury as to the genuineness or extent of the alleged injury. But we cannot admit the principle that, either in the presence of the jury, or in the presence of a referee, a party can compel his opponent to exhibit his body in order to enable physicians to examine and question and testify.

"Section 834 of the Code, forbidding a physician to testify to information obtained while attending a patient, necessary to enable him to act, is not strictly applicable to the question now under consideration.

"But, if the law will not permit a physician, voluntarily consulted, to reveal what he has learned, can it be that the law will compel a party to reveal, by exposure of the body and by answers to questions, facts to a physician to which he may afterward testify in court?

"There may be danger that in actions of this nature plaintiffs will exaggerate the injuries they have received, and that defendants may be at a disadvantage in ascertaining the exact truth. But this evil is far less than the adoption of a system of bodily and perhaps immodest examinations, which might deter many, especially women, from ever commencing actions, however great the injuries they had sustained."

THE VALUE OF RECREATION.

SIR JAMES PAGET has been addressing the Workingmen's College on "Recreation," and a great treat it must have been to the members to hear the "golden-mouthed" surgeon. It is certainly good for one whose position places him above all suspicion, as his good nature and sincerity puts him above envy, to display this interest in workingmen. He discoursed to them on change as the essential of recreation, but said that wonder should be awakened and the exercise of skill called forth. Then he tried to show that special pleasures are a sort of survival of our ancestral instincts. Our forefathers had to clear the forests, make roads, fish, hunt, and so on. Sir James is strong on hereditary habits and instincts, but we do not suppose he would go in this direction further than to the time when all were hunters. Perhaps after all those are right who look for the greatest degree of change in employment as recreation. Thus mental should give way to physical exercise. At any rate, it has been found that students, although relieved from fatigue by sedentary change, do not benefit so much as when they cease to make mental efforts. A game of chess may be very well after a spell of medical study, but a game of cricket would be better for any one who has physical energy enough to enjoy it. So to workingmen an evening at their college should be regarded as recreation—the process being merely reversed.

M. CHARCOT has been elected a member of the Academy of Sciences, Section of Medicine and Surgery, in place of the late Baron Cloquet.

News of the Week.

THE LATE DR. J. MARION SIMS.—At the last meeting of the Newport (R. I.) Medical Society, Dr. Samuel W. Francis, Vice-President, presented the following resolutions, which were adopted:

Whereas, It has pleased Almighty God to remove from this earth Dr. J. Marion Sims; therefore

Resolved, That, in his death, Science has lost a star; Surgery a pioneer; Gynecology an originator; America one of her philanthropists; and the fair sex their best friend.

Resolved, That the name of J. Marion Sims will live till woman dies.

Resolved, That the boldness of his operations was only equalled by his tenderness and sympathy at the bedside.

Resolved, That, as he belonged to the world, both hemispheres will mourn his loss and cherish his memory.

Resolved, That a copy of these resolutions be transmitted to the family.

THE PROPOSED MONUMENT TO THE LATE DR. J. MARION SIMS is taking a definite shape. We have received the first contribution for the same to the amount of ten dollars from R. C. Derby, Newport, R. I., on behalf of the Sanitary Protective Association of that place. This example will doubtless be followed by others. THE RECORD will gladly do anything in its power to make the project a success. No more worthy name than that of Sims could be chosen to represent the genius of the profession of this day and generation. As suggested by Professor Byrd, of Baltimore, the monument should be erected in Central Park. There is no more appropriate place than this. Any subscriptions to the fund will be duly acknowledged in THE RECORD.

SIR PRESCOTT HEWITT RETIRES FROM PRACTICE.—One of the recently created medical baronets has already disappeared from London practice. Sir Prescott Hewitt, always fond of sport, retires to the country, where we may wish him long life to enjoy his *otium cum dignitate*.

ACCUSED OF MANSLAUGHTER FOR TRACHEOTOMY.—A further illustration of the risks medical men run has turned up recently. A London surgeon is now accused of manslaughter for a tracheotomy after which the patient died. The father of the child when the operation was performed sucked the tube to free it, and thus contracted diphtheria from which the patient was suffering. He brought an action against his doctor for damages for not preventing him sucking the tube—the lawyers thinking with the father that the doctor should have himself taken the risk! Failing in this action, the bereaved parent, or his lawyers, seek to convict the doctor of manslaughter of the patient, which the operation did not save. When patients talk of gratitude and what they owe the profession such things as this should be remembered. One cannot help feeling that such actions are got up by an inferior class of lawyers.

THE MANUFACTURE OF CIGARS IN TENEMENT-HOUSES.—The act of the last Legislature prohibiting the manufacture of cigars in tenement-houses has already been brought before the Court of Appeals. The constitution-

ality of the act is disputed on the ground that it is an unauthorized interference with the private pursuits of citizens, and defended on the ground that it is a legitimate exercise of police power for the protection of the public health. The real question is whether cigar-making in tenement-houses is injurious to the public health in the sense that justifies an interference by the State to prevent it, or whether the real object of the law is not to prevent the competition of tenement-houses with the regular factories in cigar-making.

Female Physicians in Insane Asylums.—Dr. Sarah Stockton has been appointed physician to the female department of the Indiana State Insane Asylum.

Selling Adulterated Drugs.—In the test case against Billings, Clapp & Co., wholesale druggists, the defendants were found guilty last week of selling tincture of opium containing a less quantity of morphine than that prescribed by the Pharmacopœia. They were fined a nominal sum, and will take the case to the Superior Criminal Court.

Charity Organization.—A very successful meeting was held at the Union League Club Theatre last week, for the purpose of popularizing the methods of the Charity Organization Society. Mr. Joseph H. Choate, Mr. Curtis, Judge Daly, and a number of others spoke. We can only regret that the medical side of the matter, which is not the least important, was not represented. The following interesting facts regarding the need and the supply of charity were given: In New York one in every twenty-seven receives charitable help. The experience of other cities which have adopted organization proved that only one-third of the applicants were entitled to immediate money relief; that only one-tenth required continuous relief; that between ten and twenty per cent. were impostors, and that one-half only needed advice and encouragement to help themselves.

Brooklyn Vital Statistics.—In his annual report to Mayor Low, Health Commissioner Raymond says the health of the city of Brooklyn during 1883 has been better than in any year since 1879. The total number of deaths in the city in the twelve months ending November 30, 1883, was 13,833 or 1,180 less than the actual mortality during the calendar year 1882. Estimating the population at 624,118, the death rate is 22.16 in each thousand of persons. Among other things Dr. Raymond says: "I am impelled to state my conviction that the efficient operations of the Department of City Works have vastly improved our sewer system, and for some months at least have given us pure air to breathe by giving us relatively cleaner streets under the new contract, and have thus indirectly come to the aid of the sanitary authority in its fight against zymotic disease." Attention is called by Dr. Raymond to the great need for new sewers in the outer wards of the city, which are now being so rapidly built up, and he also recommends that the slaughter-houses be removed from the crowded portions of the city.

A National Veterinary Association Formed.—Delegates from various State Veterinary Associations held a meeting at Chicago on December 13th, for the purpose of forming a National Association. Among the Eastern representatives were S. V. Plageman, of Brooklyn; J. Finley and W. J. Connody, of New York City. The morning session was devoted chiefly to a discussion of the eligibility of delegates. In the afternoon a permanent organization was effected under the title of the National Veterinary Medical Association, and the following officers were elected: *President*—L. V. Plageman, of Brooklyn; *Vice-Presidents*—W. C. Fair, Cleveland; William Sheppard, Ottawa, Ill.; W. T. Connody, New York; *Secretary*—R. A. Harding; *Treasurer*—A. J. Chandler, Detroit; *Corresponding Secretary*—Joseph Hughes, Chicago. In the evening a banquet was held, a constitution adopted, and the organization perfected.

A "Natural Bone-Setter" Sued for Malpractice.—One of the family of Sweets, of Connecticut, who have long been known for their reputed skill in setting bones, has been arrested and will be sued for malpractice. We believe that "natural bone setters," taking it all in all, do a great deal of harm, and ought to be abolished as public nuisances.

Cincinnati as a Medical Centre.—Cincinnati has, according to a correspondent of the Chicago *Medical Journal*, four hundred and sixty-three doctors, "regular, irregular, and defective," five hospitals, two medical colleges, two medical libraries, five medical societies, three medical journals, and a health board, and an extra proportion of midwives and bogus medical colleges.

A Novel Strike.—It is rumored that the wet-nurses (*nourrices*) in the pay of the Assistance Publique, intend to strike. They receive from fifteen to eighteen francs a month, but consider it insufficient, as private families pay at a higher rate. The director of the Assistance Publique has enumerated in this year's budget a sum of one hundred and fifty thousand francs for the benefit of wet-nurses. It is unknown whether this is a coincidence or a result.

Dr. H. Z. Gill has accepted the chair of Clinical and Operative Surgery in the medical department of Wooster University, Cleveland, O.

Dr. W. H. Hooper, of Philadelphia, died December 18th of Bright's disease, aged fifty-nine.

Professor Alonzo Clark reminds us that we have, in speaking of the medical fathers of New York, bestowed on him more years than he deserves, he having been born March 1, 1808. We are only too glad to transfer the difference in calculation to the credit side of hopeful realization—and more, too.

Enlarging the Opportunities for Dispensary Work.—Several New York City dispensaries have evening hours, and recently a Philadelphia dispensary has adopted Sunday morning hours.

A Crematory Association has been formed in Washington, and Congress is to be asked to give it a charter. A German physician has given a lot on which to erect a crematory similar to that in Washington, Penn. One of its members says that the expense of burning a body will not be more than $35, and that soon they may be able to reduce it to $20.

Trichinosis in Illinois.—Several cases of trichinosis have appeared in a German boarding-house at Bloomington, Ill. The disease was caused by eating raw sausage made from a hog raised in the place.

CHOLERA STATISTICS.—A communication from the United States Consul-General in Cairo, Egypt, to the State Department, gives an official statement of the cholera epidemic in Egypt, in which it appears that from forty-eight to fifty thousand persons have died of the scourge during the period from June to September 1, 1883. Dr. Salem Pasha, President of the Egyptian Sanitary Council, states that the Council of Health is engaged in collecting precise statistics of the number of victims. He also states that the disease broke out anew at Alexandria after it had disappeared, with a daily mortality of three to twelve persons. It has not reappeared elsewhere. He says that the "Sanitary Bulletin," which was published during the prevalence of the disease, gave erroneous accounts, and instances one case in Cairo where the "Bulletin" gave the number of deaths on July 24th at 456, when in fact there were more than twelve hundred. It is believed the total mortality for four months will reach nearly seventy thousand.

In many villages a majority of the laboring population have died, while in others entire communities have disappeared, hardly leaving enough people to cultivate and harvest the crops. At Calcutta the deaths from cholera for the week ending October 27th numbered 20 out of a total mortality of 243.

YELLOW FEVER deaths at Havana, Cuba, for the week ending December 8th amounted to 23. Only two suspicious vessels sailed for American ports during the week: American schooner Elwood Burton, for Pensacola, and Spanish bark Antonieta, for New Orleans. In Mexico the disease still prevails, with twenty deaths at Acapulco, and several sporadic cases at Vera Cruz. A new outbreak of the disease at Orizaba is reported by Assistant-Surgeon Main, consequent upon too early raising quarantine against Vera Cruz.

EGYPTIAN RAGS are hereafter to be disinfected before shipment to this country. This precaution has been inaugurated by the State Department at the request of Surgeon-General J. B. Hamilton of the Marine Hospital Service. Pressure under steam and such other measures as may be found to be efficient for the purpose will be used.

MEASLES IN WASHINGTON.—Washington, D. C., is undergoing a siege of measles, and many of the public schools have been forced to close on account of the epidemic.

THE DWIGHT INSURANCE CASE.—Apropos of this now celebrated case, we have received a letter from Dr. Daniel G. Burr, of Binghamton, N. Y., criticising the action of the medical experts for the insurance company. There were, he writes, a well-known New York physiologist, a neurologist, and an Albany physician, who were most prominent as expert witnesses and "coachers" for the counsel. Dr. Burr says that these gentlemen worked and associated together, although two were staunch Old Code adherents, while the third was of homœopathic affiliation.

The turning-point in the suit was the post-mortem appearance of the neck of the deceased, the defence claiming that the person deceased had committed suicide by hanging himself in bed, the plaintiffs that he did not. Fifty-eight hours after death an autopsy was held, which was conducted by Dr. Francis Delafield, of New York City, in the presence of thirteen or fourteen other physicians. Some six or seven of us average doctors who witnessed the autopsy were subpœnaed by the plaintiffs to testify to the question of fact, *i.e.*, whether there was any mark of a cord across the windpipe. Our testimony was duly given, we stating that *no such mark was present.* Despite this, the experts in question testified that his death was caused by hanging. At the time when this case came up, we expressed that opinion, based upon Dr. Delafield's careful autopsy that there was no evidence of suicide. Under our present system, however, it is expected that medical men will help the side for which they are engaged if they can conscientiously do so. Our correspondent is particularly indignant that the absolute facts, testified to by half a dozen "average doctors," should be ignored, or their existence practically denied under oath, by learned experts. And he concludes: "Is our civilization a failure? and the 'average doctor' played out?"

Obituary.

THOMAS S. KIRKBRIDE, M.D.,

PHILADELPHIA, PA.

THOMAS STORY KIRKBRIDE, M.D., Superintendent of the Pennsylvania Hospital for the Insane, died on December 17th at his home in Philadelphia. Dr. Kirkbride suffered a protracted illness about four years ago, from which he never fully recovered. Last spring he was again prostrated, and never rallied to any hopeful extent. For more than forty years Dr. Kirkbride's name has been familiar to the medical world as associated with the study of insanity. He was born near Morrisville, Bucks County, Pa., July 31, 1809. He was a descendant of Joseph Kirkbride, of the parish of Kirkbride, in the county of Cumberland, England, who came to America with William Penn. He received his education at Trenton, N. J., whence he came to Philadelphia and graduated at the medical department of the University of Pennsylvania in March, 1832. One month later he was appointed resident physician to the Friends' Asylum for the Insane, situated near Frankford, where he remained for one year; and in the spring of 1833 was elected to the same position in the Pennsylvania Hospital, which he held for two years, after which he engaged in private practice in Philadelphia. In the autumn of 1840 a new institution for the insane, now well known as the insane department of the Pennsylvania Hospital, commonly called "Kirkbride's," was so near its completion that it became necessary to select a superintendent. To this post, in October, 1840, Dr. Kirkbride was elected, and he remained the head of the institution until his death.

Under the promptings of Dr. Kirkbride and kindred spirits the association of the Medical Superintendents of the Insane Asylums of America was formed in 1866, of which he was President for eight years. He was elected a Fellow of the Philadelphia College of Physicians in 1839, was a member of the Philadelphia County Medical Society, the American Philosophical Society, the American Medical Association, and the Medical Society of the State of Pennsylvania. He was the author of the volume on "The Construction, Organization, and General Arrangement of Hospitals for the Insane," and on "Rules for the Government of those Employed in the Care of the Insane." In addition, he contributed a number of valuable monographs and reviews to the *American Journal of Insanity* and other periodicals. Personally

Dr. Kirkbride was remarkable for his genial temperament, which quickly endeared him to those members of the profession with whom he was thrown in contact. He was a man of modest and retiring character, but exceedingly clear and pronounced in all his social, political, moral, and professional opinions.

Reviews and Notices.

A Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, A.M., M.D., LL.D. Fifth edition, revised and enlarged. New York: D. Appleton & Co. 1884.

The author has adapted the present edition to the changes made in the sixth edition of the United States Pharmacopœia. He has also given the whole work a careful revision, incorporating the more recent improvements and additions to therapeutics. About one hundred pages are thus added to the volume. The valuable practical character of Dr. Bartholow's treatise has been recognized by the profession, and probably no one has succeeded better in popularizing the physiological in distinction from the empirical mode of studying therapeutics. The book is so excellent a one that we can hardly pick out any faults without venturing dangerously near hypercriticism. It appears to us, however, that there is a certain lack of definiteness in his description of the physiological action of the drugs; thus it is not enough to say that a drug increases the strength of the heart-beat and the volume of the pulse, we must know, and pharmacology does know in very many cases, upon what part of the nervous mechanism the action takes place. The book contains notice of several recently introduced drugs. The author would not, perhaps, recommend muscarin so readily if he knew that it was sixty cents a grain. He is, perhaps, a little too ready to recommend drugs, and to endorse their usefulness. All this, however, does not prevent the book from being a most admirable one, and a credit to American medicine.

Suicide: History of the Penal Laws relating to it in their Legal, Social, Moral, and Religious Aspects, in Ancient and Modern Times. By R. S. Guernsey, of the New York Bar. Read before the New York Medico-Legal Society, September 23, 1875. Revised and enlarged. New York: L. K. Strouse & Co., Law Publishers. 1883.

A monograph on this particularly important medico-legal subject by an accomplished lawyer cannot fail to be instructive and interesting to the practitioner of medicine. Mr. Guernsey has certainly given us an admirably thorough, systematic, and complete treatise within the necessarily brief compass of a society paper. It is far from a bare digest of ancient and modern laws. If we may be allowed the comparison, the book resembles a well-written novel, not so distinctively from its pleasant grasp on the reader's attention, but from the masterly touches, which insensibly and without effort impress one with the motive behind the facts. Mr. Guernsey's wealth of research and aptness of illustration give us the side lights necessary to a rounded conception of each stage of his subject. We are made to understand so easily, as we advance, the social character of the period, that we appreciate at once the actions which induce the individual to suicide and the portent of the laws devised to meet each exigency.

The book is, on the face of it, a simple and unostentatious effort, and would naturally preclude anything like elaborate analysis or criticism (the few sentences we offer are certainly not intended to bear such an interpretation), but we have in it happily exemplified a manner of treatment which medical authors rarely attempt, or at least rarely attain. The average medical text-book is practically nothing but an elaboration of the quiz compend; and bears about the same resemblance, so far as method is concerned, to the work under consideration that an anatomical remembrancer bears to the better chapters of Ziemssen. The former is mechanical, the latter philosophical; the one gives at best an imperfect photographic, the other a stereoscopic view.

The fault of a medical man's style is due in a great measure to his imperfect literary training, but it is a very unfortunate fault, nevertheless, for it exalts memorizing at the expense of independent thought. The knowledge gained from the one is evanescent, from the other permanent.

The profession should learn more thoroughly to regard facts from a lawyer's standpoint. It would conduce to an exact balancing of evidence, and to an habitual suspension of judgment without evidence and hence to an accurate and adequate diagnosis. It would compel a presentation of facts that would appeal to the reason rather than the memory, and would in so far help to banish dogmatism from the lecture-room and medical literature and empiricism from practice, "a consummation devoutly to be wished for."

A Manual of Pathology. By Joseph Coats, M.D., Pathologist to the Western Infirmary and the Children's Hospital, Glasgow, etc. With 339 illustrations. Philadelphia: H. C. Lea's Son & Co. 1883.

Of late years British and American students have had to depend for a treatise on pathology upon translations from the French or German, or such elementary text-books as Green's "Introduction." It is, therefore, pleasant to be reminded that an English author can produce a work on this all-important branch of medicine which may compare favorably with foreign books. Dr. Coats has not attempted to write a new pathology that rests upon his personal observations alone, and yet an examination of his work plainly shows that it is no mere compilation. In fact, one of the best features of this treatise consists in the judicious admixture of foreign observation with private experience. Thus the subject is presented in a harmonious manner, facilitating the study of single topics, and making the entire volume profitable and even pleasant reading. The book is a rather bulky one, because the author includes in his descriptions general pathology as well as the special pathological histology of the different systems and organs. Many of the drawings are well-executed originals, and it is quite refreshing to be relieved from cuts that through frequent appearance in different works have bred the contempt of excessive familiarity. On the whole, it is but fair to say of Coats' pathology, that its author has succeeded in offering to English students and practitioners a thoroughly acceptable work that will now enable them to get along without translations.

Treatment of Diseases of Infancy and Childhood, with over Four Hundred Formulæ and Prescriptions, as exemplified in the Services of Drs. A. Jacobi, J. Lewis Smith, Alonzo Clark, Austin Flint, W. A. Hammond, A. L. Loomis, W. H. Thomson, J. H. Ripley, T. Gaillard Thomas, J. R. Leaming, F. Delafield, L. A. Sayre, C. R. Agnew, L. Duncan Bulkley, Beverley Robinson, R. W. Taylor, G. H. Fox, F. N. Otis, A. A. Smith, E. C. Seguin, F. A. Burrall, E. G. Janeway, F. H. Bosworth, A. H. Smith, C. E. Billington, G. M. Lefferts, etc., etc., and in the hospitals of New York City. By Charles H. Goodwin, M.D. Second edition, revised. New York: C. H. Goodwin, M.D. 1883.

We are glad to note the cordial approval with which Dr. Goodwin's compact and complete little manual has been received by the profession, and the gratifying rapidity with which a second edition has been demanded. We take pleasure in congratulating its painstaking author, and in again commending the book to our readers.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 28, 1883.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. J. W. HOWE presented, in behalf of a candidate, a specimen of "Diffused Aneurism of the Popliteal Artery."

CHRONIC HYDROCEPHALUS.

DR. H. N. HEINEMAN presented a brain removed from a hydrocephalic child, two years old, and weighing only twelve pounds. It was interesting, especially on account of the thinning of the brain-tissue.

SARCOMA OF THE STERNUM, PLEURA, AND LUNGS.

DR. C. HEITZMAN presented a specimen with the following history: Dr. M——; forty-five years of age, came to his laboratory in April, 1882, for the purpose of having his blood examined, fearing the existence of leucocythæmia. For a year he had suffered from malarial poisoning, and claimed that his spleen was enlarged. Dr. Heitzman made a microscopical examination of blood taken from the finger, and found a decrease rather than an increase of the colorless blood-corpuscles; but the red blood-corpuscles exhibited a brown, reddish color, which he regarded as evidence that the normal formation of blood was being interfered with somewhere in the system, and he advised a change of climate, etc. At the same time Dr. M—— showed a tumor over the sternum, about the size of a pigeon's egg, movable superficially, but attached to the periosteum, and soft to the feel. Suspicion arose that it might be malignant, although it was stated that it had existed for a long time and had grown very slowly. Three months afterward Dr. Heitzman examined a specimen of blood drawn from the right pleural cavity of the patient, and found no pus corpuscles, no inflammatory corpuscles, but the red corpuscles exhibited the appearance already described. The fluid was non-coagulable. Dr. Gerster aspirated the pleural cavity several times, and subsequently Dr. Lange aspirated the tumor, and the blood removed from that was also examined, and exhibited elements which reminded one of sarcoma, although nothing specially characteristic was found. The diagnosis of sarcoma could only be suspected.

In August last another specimen of blood was sent to Dr. Heitzman, who examined it and found that of the few colorless corpuscles present many were undergoing disintegration, which always indicates approaching death.

Every time aspiration was performed, indicated by great difficulty of breathing, it was followed by considerable relief. In September dyspnœa returned, and while aspiration was being performed the patient died.

At the autopsy Dr. Heitzman found the body much emaciated. The tumor, then about the size of half a small goose-egg, was united to the periosteum, and on cutting into it an opening was found leading into the sternum, and large enough to admit his little finger. This perforation led to a cavity filled with blood, and evidently bounded by a tumor of the size of a small apple in the mediastinum. Both pleuræ were considerably thickened; both apices of the lungs were peculiarly changed into a callous-like substance, difficult to cut, somewhat resembling cirrhosis, but not having the gray color usually seen in old cicatrices in the lungs. There was a small quantity of blood in each pleural cavity. The heart was flabby. The liver was slightly increased in size, browner than normal, and showed very numerous dark purple specks, from which small drops of dark purple blood oozed, characteristic of cavernous tumors of the liver. The spleen was enormously enlarged, very firm, and gave a peculiar creaking noise when cut. All the other organs were quite normal. The bronchial glands were somewhat enlarged.

The question arose, Was death due to an inflammatory process, or to a neoplasm? The appearance of both pleuræ indicated chronic pleurisy. Microscopical examination determined that the original tumor was sarcoma of the sternum, which grew inward rather than outward, and led to the destruction of the bone and the development of a sarcomatous growth in the anterior mediastinum. Both pleuræ and both apices of the lungs were transformed into dense fibrous tissue with innumerable aggregations of small globular bodies, which are seen with chronic inflammation and also in fibro-sarcomatous tumors, but the absence of inflammatory elements in the blood at previous examinations pointed toward the conclusion that the thickening was fibro-sarcomatous rather than inflammatory. The bronchial glands were sarcomatous. The little specks on the liver exhibited the usual features of cavernous tumors, or angiomata, and there was also interstitial hepatitis. The spleen was entirely destroyed. It contained myxomatous tissue, traversed by blood-vessels filled with blood, and evidently the organ was the seat of intense congestion.

The points of interest in the case were: (1) the remarkable combination of a malignant and benign growth, in the liver vascular tumors, and in the thorax sarcoma and fibro-sarcoma; and (2) although the tumor in the thorax was decidedly malignant, it gave rise to only few symptoms. Whether or not this peculiar feature was due to the impaired condition of the blood he was unable to say. To be sure, the condition of the spleen pointed directly to alteration in the formation of red blood-corpuscles.

DR. VAN GIESON said that about three years ago he presented a specimen in which the condition of affairs was just the reverse of that which existed in Dr. Heitzman's specimen—namely, primary sarcoma of the lung, and the sternum affected secondarily. With regard to the difficulty of diagnosis and the statement made by Dr. Heineman that more diagnoses of sarcoma and cancer of the lung and pleura are made post-mortem than during life, there might possibly be some difference of opinion. The diagnosis of the existence of a tumor of the lung, whether carcinomatous or sarcomatous, is sometimes a comparatively easy matter, when all the surrounding circumstances are taken into consideration, and the history of the case thoroughly known from the beginning.

In the case, the specimen from which he presented, there was no great difficulty in making the diagnosis, and it was confirmed by autopsy. Shortly after the report of the case was published he received from a gentleman, whose name he could not then recall, a table containing forty-five cases, and in over forty per cent. of those a correct diagnosis was made during life. In the case which he had reported, the symptoms were of such a character, it would seem, that no other diagnosis could be made which would account for them. There are cases, however, in which the difficulty of diagnosis is very great.

DR. HEITZMAN said that in one case he succeeded in making a diagnosis of sarcoma of the lung without even seeing the patient, and by examining the sputa, which contained globular elements smaller than pus-corpuscles or mucous corpuscles, and very numerous.

PERICARDITIS—ULCERATIVE ENDOCARDITIS—ABSCESS OF THE HEART—MICROSCOPICAL ABSCESSES OF THE KIDNEY WITH COLONIES OF MICROCOCCI, AND THE BLOOD-VESSELS IN THE NEIGHBORHOOD FILLED WITH MICROCOCCI, RESULTING FROM THE INTRODUCTION OF A URETHRAL SOUND.

DR. GEORGE L. PEABODY presented the heart and one kidney removed from the body of a man who died of pyæmia following the introduction of a sound into his urethra. He had been treated on previous occasions for stricture above the bulbous portion, at no time close,

which admitted a No. 23 French. On November 18th a surgeon passed a sound, and on its withdrawal a few drops of blood followed, as had frequently occurred after the use of the instrument on previous occasions. Within twenty-four hours the man had a severe chill, followed by marked rise of temperature, delirium, and death on the eighth day.

Autopsy.—The heart showed the lesion of acute pericarditis, and also acute ulcerative endocarditis, with partial destruction of one of the cusps of the aortic valve. There was also an abscess in the heart as large as a small chestnut, just below the site of the aortic valves. The kidney contained abscesses, each surrounded by a zone of intense congestion.

Microscopical examination.—Dr. Peabody presented several microscopic slides, which showed micrococci in greater abundance than he had ever found before. Many of the abscesses in the kidney were of microscopic size. They contained colonies of micrococci, and the blood-vessels in their neighborhood were, very many of them, apparently completely plugged with micrococci.

Dr. Heitzman asked whether Dr. Peabody examined the primary lesion, especially with regard to purulent phlebitis, which invariably precedes pyæmia.

Dr. Peabody said he examined the urethra with care and found no evidence of phlebitis.

Dr. Heitzman also asked Dr. Peabody whether he held that the abscesses in the kidney were due to emigration of pus-corpuscles or to the breaking down of the entire kidney tissue itself.

Dr. Peabody said it was difficult to answer the question, because both conditions are found according to the stage of the disease in which the patient dies. In some of these abscesses it is evident that there is an intense aggregation of young cells without breaking down of tissue, while in others there is the same aggregation of cells but with breaking down of tissue. His own belief was that the presence of these irritants (micrococci) was sufficient to cause breaking down of tissue; and that they differ from other emboli in that they are distinctly infected by irritant properties, which are capable of causing the death of tissue in which they lodge. With regard to the pus, he believed that it originated here, as in inflammatory processes elsewhere, in part from colorless blood-corpuscles, but by no means entirely in that manner.

Dr. Heitzman remarked that the statements made by Dr. Peabody fully agreed with what he had seen in abscesses of the liver and kidney.

SPINA BIFIDA—PARAPLEGIA, WITH LOSS OF CONTROL OVER THE VESICAL AND ANAL SPHINCTERS—OPERATION—CURE—DISAPPEARANCE OF THE PARAPLEGIA AND RESTORATION OF CONTROL OVER RECTUM.

Dr. R. Van Santvoord presented the liver and kidneys removed from the body of a boy twelve years of age. Early in life the patient was afflicted with spina bifida, attended by paraplegia and paralysis of both rectal and vesical sphincters. When six months old he was operated upon, and the result was a cure of the spina bifida, followed by restoration of power to the legs, almost complete control over the anal sphincter, but from early infancy he had been the subject of incontinence of urine. Occasionally he was unable to pass his urine and it was necessary to use the catheter. Sometimes he had a certain amount of control over the discharge of urine. The patient came under Dr. Van Santvoord's observation about the middle of last August. It occurred to him that possibly the cause of the urinary trouble might be contraction of the bladder, and he suggested the daily introduction of a catheter, with gentle dilatation by hydraulic pressure, but the bladder was found to be of considerable size. The boy soon began to lose his appetite, his urine contained pus and albumen, there was a daily elevation of temperature, and death occurred in November from exhaustion.

The autopsy was made by Dr. E. A. Maxwell, who found the bladder much thickened and sacculated; the ureters dilated—especially the left, which was larger than the small intestine, with enormous dilatation of the pelvis of the kidney on the same side—and filled with pus. There were abscesses in the structure of the right kidney and dilatation of the pelvis. The case, therefore, was one of spina bifida causing paralysis of the sacral plexuses on both sides, which was cured by an operation, and with the cure the paraplegia disappeared and control over the anal sphincter was restored. The dilatation of the left ureter was the most remarkable feature of the specimen.

HALLUX VALGUS—OPERATION—CURE.

Dr. Lewis Hall Sayre presented the heads of the metatarsal bones of the great toe on each foot, removed on September 24th for the relief of hallux valgus. The man was forty years of age, and otherwise perfectly healthy. The condition had existed for many years. The joint on the right foot had suppurated twice, but no bone had ever been discharged. A straight incision was made over each joint and carried down through the periosteum, which was raised with an elevator, and the head of the metatarsal bone removed by means of bone forceps. The operation was performed antiseptically, horsehair drainage was employed, and the wound was closed with black silk sutures. Union was complete within two weeks, without suppuration. The patient was discharged able to walk without trouble and with movable joints.

ULCER OF THE STOMACH.

Dr. Beverley Robinson presented a specimen with the following history: H. G——, male, single, fifty-eight years of age, a native of United States, and a salesman, was admitted to St. Luke's Hospital, November 13, 1883. Patient had been suffering four or five months from palpitations and dyspnœa. At present he has considerable œdema of the legs, no lumbar pains, micturition normal, no intestinal symptoms, no chest pains, temperature subnormal; urine 1.020, acid, faint cloud of albumen, a few epithelial scales; sonorous and sibilant râles are disseminated throughout the chest; more marked over left side; heart sounds feeble, though normal. Digitalis and whiskey were ordered.

November 14th, examined by Dr. Robinson. Old pleuritic adhesions are discovered on both sides of the chest. Considerable pleuritic effusion in lower half of right pleural cavity, less amount of effusion in left pleural cavity. Superficial pleuritic râles heard over both lungs, principally during inspiration, resembling sub-crepitant râles.

November 19th.—Patient becoming suddenly worse the house physician was called; when he arrived patient was quiet, comatose, breathing heavily; no jactitation; no sighing respiration; body and extremities *not* cold; heart action feeble. Night before patient had a bloody stool. Stimulated with digitalis and whiskey hypodermically; death.

Autopsy by Dr. F. Ferguson; notes by Dr. King, junior assistant.—Body is fairly nourished; rigor mortis is well marked. There is general anasarca. There are twenty-four ounces of clear serum in the peritoneal cavity. Diaphragm on right side is at the fourth intercostal space; left, fifth intercostal space. There are forty-eight ounces of reddish serum in the right pleural cavity, and thirty-six ounces in the left. There is one band of old adhesion at the apex of left lung, no adhesions on the right side. The heart is hypertrophied, its cavities are dilated; the muscular tissue contains fat; the valves are competent; there are some atheromatous patches on the anterior segment of the mitral valve; the aortic cusps are thickened. The lungs are in the condition of brown induration, they are poorly aërated. The mucous membrane of the bronchial tubes is normal. The spleen is normal. The kidneys are

lobulated, a trifle small; capsules are not adherent, surface is smooth and the markings are not distinct. The intestines contain blood, otherwise normal. There is an ulcer on the larger curvature of the stomach, irregularly ovoidal and two inches from the pylorus, with elevated edges (nearly half an inch above the rough bottom of the ulcer); there is a vessel in the ulcer plugged with fibrin, of considerable size. The mucous membrane of the stomach is markedly thickened; the stomach contains sixteen ounces of blood. The liver contains an excess of fibrous tissue. The brain is anæmic; there is atrophy of the convolutions; the lateral ventricles are distended with serum.

Microscopical examination made by Dr. Ferguson.—Stomach: There is no evidence of malignant disease in the neighborhood of the ulcer. It is surrounded by fibrous tissue, small areas of fat, and numerous small round cells of inflammatory origin, small spindle cells, and a few non-striated muscular cells. The muscular cells of the heart contain some fat-globules in places, but the transverse striæ can be seen generally.

Remarks.—"The features of interest in this case are: 1, patient did not accuse any local pain in stomachal or dorsal region while in the hospital; further, he digested the ordinary hospital fare without accusing any functional difficulty; 2, the absence of the usual symptoms indicating severe internal hemorrhage, such as jactitation, sighing respiration, and coldness of trunk or extremities."

ABSCESS OF THE SCALP—MENINGITIS.

Dr. W. P. Northrup presented a specimen with following history: Female child, aged eight months; New York Foundling Asylum. Was brought to the Out-door Department, November 13th, with symptoms of erysipelas of the scalp. Child was irritable and restless. November 13th, was returned to the Asylum hospital wards, when the following points were noted. Well-marked abscess over the right parietal bone, general hyperæsthesia, stiffness of back of neck. Pupils sluggish, otherwise no eye symptoms. Nurse who returned the child said it had "inward spasms" all the previous day. While in the house it lay in a rather apathetic condition. When undisturbed it would lie quietly for a long time, and when tickled on the soles of the feet "twitched all over." Died quietly November 25th.

Autopsy, November 28th.—Body well nourished. Abscess undermining scalp, covering whole right parietal bone; scalp thinned, bone bared of its periosteum. Opening about size of a silver twenty-five cent piece over the boss, edges of opening sloughy, outer table of the skull undergoing rarefying osteitis. Fontanelles normal; scalp elsewhere normal. On removing the calvarium no fluid escaped. All the sinuses were examined; all contain fluid blood; nothing abnormal. The walls were entirely normal. Beneath the parietal bone of the right side the dura mater was adherent. Nowhere from the inside of the skull-cap could any signs of communication with the abscess be found, neither were there any discolorations nor localized congestion. Brain: Nearly the whole convexity was covered with a thick, continuous, greenish-yellow, fibrino-purulent exudation, so thick over most of the surface as to cover the largest vessels and hide their color; in some places the outlines of the large vessels were seen encased in a thick coating; the exudate extended irregularly around to the base and there was found in scattered regions; about the optic commissure and medulla there was no exudate; ventricles normal; vessels of pia mater injected, giving the bright reddish tint in strong contrast with the greenish-yellow exudation. Spinal cord: vessels of pia mater injected, no exudation. Lungs: Moderate hypostatic congestion. Heart, spleen, and kidneys normal. Liver fatty. Stomach and intestines showed moderate increase of tenacious mucus, with dull gray, sodden, mucous membrane; mesenteric glands enlarged, firm, and reddish.

A SKULL ONE-SIXTEENTH OF AN INCH THICK.

Dr. J. A. Wyeth presented a piece of bone removed with the trephine from the skull of an adult. It showed the average thickness of the skull and was the thinnest he had ever seen, being only about one-sixteenth of an inch thick.

The Society then went into Executive Session.

THE PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, November 2, 1883.

George F. Shrady, M.D., President, *pro tem.*, in the Chair.

Dr. Virgil P. Gibney presented

A CASE OF MULTIPLE JOINT DISEASE OF SYPHILITIC ORIGIN OCCURRING IN A PATIENT WITH SCROFULOUS CARIES OF THE KNEE.

The subject of the present history has been under the observation of the out-door department of the Hospital for the Ruptured and Crippled, since February, 1872. At that time she was three years of age, and the diagnosis recorded then was synovitis of the left knee.

From February, 1872, to February, 1876, there are no notes in the case; but in this interval suppuration appeared and continued, so that in February, 1876, a note was made that an examination of the urine presented negative results. It was thought at that time that lardaceous changes were developing, but the urine furnished no conclusive evidence.

At the present time the mother is quite positive in stating that swellings about the wrists, fingers, and ankles were only from six to eight months' standing. But a reference to notes recorded under date of March 16, 1877, shows that there were eleven open ulcers, varying in size from a line to half an inch in diameter, without very profuse discharge; a knee ankylosed at an angle of 145°, with outward rotation of the leg over a small arc, and no very marked bony enlargement.

It is further recorded that on that date she stood and walked with comparative ease, *i.e.*, when a knee-splint was applied. Mention is also made of the right ankle in the following words: "Still boggy, though motion tolerably good, and no pain." And concerning the wrists it is recorded: "About the same condition; uses the hands well." So that it appears now that these swellings have existed at least six years, and that the mother's present anxiety is due to an increase of the joint deformity. It was also recorded on the above date, in the way of family history, that this child was the eighth of ten children; that the first died when fourteen days of age; the second was living and healthy at this time; the third was premature and still-born; the fourth had cicatrices and several granular swellings about the neck, of three years' standing, and was regarded generally as a scrofulous child; the sixth and seventh children were still-born; the ninth and tenth were still living and healthy.

In addition to the notes recorded, Dr. Ripley has quite recently examined the child, and found additional proof. For instance, he finds the mother had seven miscarriages or premature births, and that one of the children who had died was covered with an eruption called measles. The mother's throat showed loss of tissue about the pillars of the fauces, and one very characteristic cicatrix was seen just in front of the uvula. The patient herself had convulsions when four months of age, and shortly afterward a conjunctivitis for about two months; and had rubeola, followed by bronchial pneumonia.

At present she has epitrochlear glands almost as large as peas. The post-cervical glands are enlarged. The hair is thin; the spleen is enlarged; her throat and teeth show nothing characteristic.

From June, 1877, to August, 1879, the notes refer only to the condition of the knee from time to time, under different remedial measures, and especially under the calcium sulphide. The results were all negative.

No notes are on record in this interval bearing upon the other joints.

It was thought in August, 1879, that the wrists presented rheumatic signs, but a case was not made out. Iodide of potassium was administered, but not in large doses.

There is nothing further with regard to her wrists or fingers until July, 1883, when it was recorded that there were peculiar swellings about the joints of the upper and lower extremities, the wrist- and ankle-joints notably. Her urine at this time had a specific gravity of 1.008, without albumen.

During all these years she has had comparatively little pain. The discharge has been rather profuse from numerous ulcers, and yet the patient has gone about with little discomfort. The deformity of the knee has not increased. Numerous sinuses remain open, even from the middle third of thigh to the calf.

The knee-joint is pretty well ankylosed. The wrist swelling is peculiar, in that the radial epiphysis is enlarged, and the synovial sac is somewhat distended. There is bony enlargement about the distal ends of the first phalanx of the index and middle fingers. The second phalanx of the little finger is held flexed on the first phalanx. The swellings are not tender, and only occasionally painful. The tibio-tarsal joints present similar swellings, but the metatarsal and phalangeal are free.

The case seems to present both syphilitic and strumous elements, and they seem quite independent the one of the other.

The patient is presented to illustrate — 1, the prolonged suppuration, extending over a period of ten years without any marked lardaceous changes; 2, the facility with which a patient thus affected can get about; 3, the immunity from pain; 4, the coincident swellings of other joints, and apparently of a different nature.

Dr. Samuel Sexton presented

A CASE OF EXCESSIVE AND TORMENTING ITCHING IN THE EXTERNAL AUDITORY CANAL OF SEVEN YEARS' DURATION, WITHOUT LOCAL LESION (PRURITUS AURIS).

The patient, a gentleman, aged forty-eight, had come to Dr. Sexton's office in February, 1877, with the following history: For one year previously there had been most distracting and intolerable itching in the left ear; sleep often had been impossible, and to relieve the itching he constantly scratched the inner extremity of the external auditory canal with the head of a large brass pin and rubbed the auricle with his hand. Some of the numerous physicians whom he consulted had advised him to instil oil, glycerine, etc., into the ear, and one of them informed him that there was an obstruction of the canal. He had occasional pains in the knees and hands, and about twice a week he had headache. He had long employed Hill's dye, an article supposed to contain sugar of lead, on the hair of his head and on the beard. Nasal catarrh existed in a mild form, but gave rise to no complaint. The external auditory canals were large and the inner end of the left one and the parts about the anterior superior quadrant of the left tympanic membrane were considerably injected by the constant use of the pin. The drum-heads were lustreless and the seat of trophic changes. The hearing was almost normal in the right ear, but somewhat impaired in the left; of this, however, he did not complain. The patient made two or three visits at this time, but treatment did not promise to give him any relief and he ceased to come.

In January, 1883, he came again, on account of the itching, which had not been relieved in the six years that had elapsed since his former visits to me in 1877. He had in the meantime again sought the advice of numerous medical men, and one of them, an aurist, under whose care he was about a year ago, made a diagnosis of aspergillus and advised the instillation of dilute alcohol into the ear several times a day; this was kept up for six months, during which time he used several quarts of alcohol, at first under the doctor's observation, but without relief. This treatment at times made him dizzy. He also took Fowler's solution of arsenic at this time.

This case puzzled me very much, but my attention having been directed more particularly to aural neuroses since his first visit, I determined to make a more searching examination of the patient than hitherto, with the hope of getting at the etiology of the disease. In the first place it was ascertained that his mother and several brothers and sisters had broken down in health rather early in life; they were some of them especially subject to head troubles.

The patient himself, who is now fifty-four years of age, is well nourished. He finds, however, that his memory is failing, and that he is easily confused. He never has a single night's uninterrupted sleep, his dreams are unpleasant, and, especially after three o'clock in the morning, the itching and nervousness prevent rest entirely, and he arises feeling worse than when he went to bed. Mental depression is at all times very great; he has frequent headaches, and is easily fatigued by any mental or physical exertion, especially by the former. After the more marked periods of excitement he perspires freely about the head. For one or two years past he has had attacks, coming on suddenly every few weeks, of mental disturbance, characterized by a confusion of ideas and attended with a sense of heat in the head and cold extremities. An attack observed during a visit to my office was marked by slow pulse and frequent sighing.

These attacks, in which constant sighing and other nervous symptoms are observed, would in women, perhaps, burst forth as hysterical storms. In the case under consideration, however, the frequently recurring waves of depression seemed to discharge themselves, as it were, in unrestrained sighs.

Four months ago some new and very disagreeable sensations were experienced; there was an explosion in the left ear like a pistol-shot, which shocked him severely and gave rise to vertiginous symptoms; he was very nervous, and distressing tinnitus aurium of a roaring, buzzing character supervened; these symptoms were the cause of so much confusion that for a time the sense of hearing was entirely perverted and both mental and physical prostration were extreme. The next day autophonous phenomena were observed. When he attempted to speak he could not understand himself, nor could the voice be modulated; it came and went, or, in other words, the autophony was intermittent. The next day after this attack being Sunday, he was very much bothered while preaching. Ever since the attack he has experienced frequent snapping in the left ear, occurring usually when he is in bed and all is quiet.

It is worthy of note that his life has been much of a struggle, and that since the death of his wife, which took place ten years ago, this has been increased.

Another fact seems of sufficient interest to be mentioned here, namely, a susceptibility to rhus poisoning. Ten years before the trouble began in his back—to be alluded to presently—he was frequently and severely poisoned by the rhus toxicodendron, the face and other parts, especially the scrotum, being much swollen. The attacks occurred several times during a period of four years, when he was engaged in handling the drug in a pharmacy. The eyes were often closed from the facial swelling, and he was sometimes confined to his room for several weeks. A son of his has a like idiosyncrasy.

An important fact remains to be mentioned: I allude to a trouble to which can in a measure be traced the aural difficulty. But a short time before the aural trouble began he experienced a severe itching on the back, between the shoulders, and extending from the nape of the neck to the lumbar region. It was not attended by any

eruption. This itching gave rise to great distress, interfering with his preaching and other work. After undergoing various treatment for this, including wet cupping, etc., he finally applied to a dermatologist for relief. A diagnosis of pruritus cutaneus was made, and a strong galvanic current was applied to the back so effectively at one sitting that *shortly afterward the trouble in the back ceased, but soon afterward began to manifest itself in the left ear*. The itching in the ear was more severe than it ever had been when confined to the back, since it never permitted him to enjoy a single night's rest. He now constantly found himself making desperate reaches for the spot of intensest irritation, usually employing the large brass pin before alluded to for the purpose, the head of which was inserted deep down into the canal. The ear, however, usually seemed worse afterward. He often rubbed the auricle violently until the friction was painful. Years ago he had practised pinching the auricle and the integument about it until the parts were red and sore, and thus masked for a time the deeper itching which he could not reach.

In general terms the patient's condition was fair, bodily nourishment being pretty good; the rheumatic diathesis had slightly increased, and the finger-joints were somewhat stiff. An important etiological factor was, perhaps, the long-continued dental irritation. The teeth began to trouble him at the age of twenty-five, and between thirty and forty they decayed very rapidly, giving rise to frequent attacks of periostitis of the alveolar processes. Only four years ago some of them were extracted. He has worn a large upper vulcanite plate for the past eighteen years.

The aural catarrh seems to have been uninterruptedly progressive; the drum-head is less lustrous than when first seen; that the transmitting mechanism of the ear has suffered the acoustic phenomena before-mentioned plainly shows.

The inner end of the left external auditory canal is considerably macerated from the prolonged application of the alcohol, and some epithelium has exfoliated. It should be stated here that at no time when examined by me were there any other local disturbances or lesions present in the internal auditory canal than could be accounted for by the constant irritation caused by the violent scratching of the canal and the introduction of oils, etc., by the patient himself.

When a certain spot on the lower and posterior wall of the inner end of the canal is touched with the point of a silver probe, it is observed that the act of swallowing is performed, and although this reflex phenomenon is involuntary, the patient fancies that he does it to relieve himself of something that ought to be removed from the throat.

In considering the history of this case, with a view to adopting a rational plan of treatment, it was found, as has been above stated, that a certain degree of heredity existed; that periodical headaches had been experienced, which may or may not have been due to malarial influences. He had long experienced great irritation of the dental branches of the fifth pair of nerves, and perhaps above all he had suffered from mental troubles. That imperfect mastication of food from loss of teeth may give rise to digestive disturbances is evident enough, and we also have a history of the existence of a rheumatic diathesis. That the rhus poisoning and the effects of using a hair-dye containing lead about the head and face, may have had their influences in originally causing the itching in the back is probable. The acoustic phenomena, consisting of autophony and tinnitus aurium, are not to be considered as a direct cause of the itching, but rather as remotely influencing the trouble by increasing the mental distress. On arriving at a diagnosis in this case it appeared that the causative influences were mainly to be found in some central nervous disturbance, which, through the aural distribution of branches from the fifth cranial and the second spinal nerves, seemed to manifest itself in the outward reflex that has been above described. Naturally, the prognosis was not encouraging, since the patient's age and habits of life were unfavorable.

The treatment consisted, in the first place, in recommending a more cheerful life, out-door exercise and other hygienic measures. It was believed that inasmuch as the dorsal cutaneous pruritus was very much less distressing than the aural symptom it would be well to invite a recurrence of the former while general mental and physical improvement were brought about, and accordingly irritation was produced on the skin of the back by means of painting with cantharideal collodion over small surfaces at a time, and he was encouraged to direct his attention to this region and indulge himself in any desire to scratch the parts.

Previously to this treatment it had been observed that pressure over the lower cervical vertebræ was somewhat painful. *For two days after the first application of the collodion was made there was no itching whatever in the ear*, and for a week subsequently it was scarcely observable, the patient speaking of it as a "dead itching." No desire to scratch the ear was experienced even during this period of time; it was the first omission in seven years to perform this act many times daily, although it had been long strictly forbidden. After several of these irritating applications, extending over some weeks, *the back finally began to itch severely*, and some of the post-cervical glands became enlarged and painful.

In the meantime the patient had been getting as much out-door life as possible, and had tried to free his mind from care.

At the end of a month the left ear was quite free of disagreeable sensations and whatever of them were at times experienced seemed masked, as it were. The right ear, however, was now occasionally the seat of titillating sensations. The above treatment began in February, 1883, and was continued until May, slight exacerbations being occasionally experienced in both of the ears, especially the left, while the itching of the back was less. Relief not being complete under the above treatment it was now determined to test the efficacy of occasional applications of a solution containing four grains of the sulphate of atropia to the ounce of water applied to that portion of the external auditory canal where the sense of itching seemed to be most intense. At first the effect was not satisfactory, the application appearing to increase rather than lessen the trouble. It was, nevertheless, persevered in and finally proved a source of relief whenever slight attacks came on. I am of the opinion that a stronger solution could be employed in some cases with advantage. It is to be hoped that further improvement will take place as the patient's general health becomes restored, but his condition is at present one of comparative comfort as compared with his former experiences; he regards himself as being seventy per cent. better than he was before treatment. The management of the purely acoustic symptoms I have purposely omitted, since they are only of special interest to the otologist.

Dr. T. A. McBride read a paper entitled,

PEPTONURIA.

He had observed last February that in some urine the addition of a saturated solution of picric acid produced a white precipitate, which dissappeared entirely on the application of heat. This reaction was noted in some twenty-three cases. For reasons referred to later he excluded all but ten cases for study, and none of the ten had been under any previous treatment and had taken no medicines whatever. In the ten cases the exhibition of heat, nitric acid, and terchloracetic acid had produced no precipitates. The precipitate was evidently not albumen. He then subjected the urines of the ten to the following tests: mercuric chloride, mercuric-iodide-potassium, Millon's reagent, tannic acid, argentic nitrate, plumbic acetate (neutral and basic), produced precipitates; absolute alcohol produced precipitate to some

extent. Dialysis was performed and the dialysate responded to all of the above tests. The following tests were applied to the urine and likewise to the dialysate without producing any precipitate: nitric, hydrochloric, and sulphuric acids; monochloracetic, dichloracetic, and terchloracetic acids; acetic acid; acetic acid and ferrocyanide of potassium. The dialysis was conducted with great care and under the most improved method. The reactions indicated the presence of peptones, but no reaction had been obtained to the bi-auret or sulphate of copper and hydrate of soda or potassa test. Professor Charles Rice, who had corroborated the research so far in the specimens of urine and the dialysates thereof, advised concentration of the dialysate, and when this was done and the cupric alkaline solution added, a rosy-red color was very apparent. All of the reactions for peptones were thus obtained. The clinical consideration of the ten cases was deferred for the present.

Dr. McBride called attention in his paper to other precipitates produced by the addition of picric acid to urine, other than albumen and peptones. Hager in 1879,[1] and more recently Drs. Cook and Watkins,[2] called attention to the fact that a solution of picric acid produces a white precipitate in the urine of those who are taking quinine, whether in large or moderate doses. They have not stated, however, that this precipitate disappears on the application of heat. It should also be borne in mind that quinine in the urine answers to all of the tests for peptones, with the single exception of the bi-auret or the alkaline sulphate of copper test. One must depend on the absence of response to this test and to the history. In none of the ten cases investigated had any quinine been taken by the individuals. A solution of picric acid also occasions a precipitate of mucin when that substance is present in sufficient quantity. In three specimens Dr. McBride observed the precipitate was not great and did not disappear on the application of heat. Hager states that normal urine boiled with a saturated solution of picric acid yields a flocculent precipitate. Dr. McBride thinks that there is no danger of confounding this with albumen.

Dr. C. L. Dana referred to the experiments of Pohl and Meixner which, among other things, had covered some of the points of Dr. McBride's inquiry. These investigators had found peptonuria constantly in all chronic purulent diseases, abscesses, bronchorrhœa, cancer, the dissolving stage of pneumonia, and in acid urine in sixty-five per cent. of high fevers. The speaker himself had found traces of peptone in the urine after a full meal. It was sometimes desirable to estimate the amount of peptone in the urine. He had found some difficulty in finding a good method of removing the albumen and mucin from the suspected fluid. The former, if present, interfered with the characteristic purple-red color which pure peptone gives with alkalies and copper. The ordinary method of acidulating, boiling, filtering, then precipitating with alcohol was not always satisfactory. He had tried recently a test devised by Hofmeister and recommended and used by Pohl. This consists in adding to the fluid to be tested about three per cent. of a saturated solution of sodium acetate, then a solution of ferric perchloride, drop by drop, till the mixture is well reddened, then sodium acetate again until the reaction is neutral or feebly acid. On boiling this, all the albumen and mucin are precipitated, leaving the peptone, if present, in solution. The liquid is filtered and tested for peptone. The speaker believed with Dr. McBride that an examination of the urine for peptone might sometimes reveal or suggest facts of importance, such for example as an internal suppuration or cancer, or a beginning leukæmia. For peptonuria seemed to exist wherever there was an active movement of wandering cells.

Dr. F. P. Kinnicutt said that the use of picric acid as a *bedside* test for determining the presence of albumen in the urine is open to many objections. It has been demonstrated that the peptones and other proteids are precipitated by it; among the latter mucin is to be particularly mentioned, as it is not re-dissolved by heat.

The presence of quinine in the urine, as Dr. McBride has mentioned, may also give rise to erroneous conclusions. As a laboratory test for detecting the presence of minute quantities of albumen and of *peptones* in the urine, I believe it to be of much value.

Dr. McBride said that he thought the recognition of peptonuria was rather an important matter. A simple test for the presence of peptone was therefore very desirable. It was necessary to remove the sources of error that exist in the use of picric acid.

As regards the use of this acid as a test for albumen, it was first employed for this purpose as long ago as 1872, a fact of which Dr. Johnson, its introducer, seemed to be unaware.

Dr. F. P. Kinnicutt read the paper of the evening, entitled

THE TREATMENT OF ACUTE RHEUMATISM BY BLISTERS.

[The paper was published in a previous issue of The Record.]

In opening the discussion, Dr. Beverley Robinson said that in a considerable per cent. of cases the existence of a cardiac murmur in acute rheumatism does not indicate any inflammatory condition of the endocardium. There was always a considerable degree of anæmia in this disease with consequent relaxation of muscular fibre, including that of the heart, which became dilated, thus causing murmurs. Recently he had been using

BLISTERS OVER THE HEART

in certain cases of chronic cardiac disease with enfeebled action and accompanying dyspnœa. They were cases where the ordinary methods failed to give relief. The blistering seemed to strengthen the heart's action. From these experiences he could see how by using blisters in acute rheumatism some increase of the heart's power might be brought about, and thus lessen the effusion into the joints.

Dr. Samuel Sexton said that some time ago he had occasion to look up the subject of blistering in connection with the aggravation of symptoms which seemed to take place in blistering over the mastoid process in inflammation of the middle ear. He then found that blistering the chest had been known to produce pleurisy, and clinical evidence seemed to show that severe blistering might increase inflammatory troubles.

[1] Pharmaceut. Central., No. 36.
[2] Medical Times, October 27, 1883. Philadelphia.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

HOSPITALS AND THEIR DRAINAGE—MORE DEATHS FROM MISADVENTURE AMONG MEDICAL MEN—THERAPEUTIC EXPERIMENTS.

London, December 1, 1883.

Practical hygiene appears to be at a low ebb amongst hospital physicians and surgeons, for sanitary defects seem to be as frequent in medical as in other institutions. The Hospital for Sick Children, Great Ormond Street, has just been closed for some time for repairs and to overhaul the drainage. More than one metropolitan hospital has, I believe, had to pursue the same course within the last few years, and the state of some of our provincial hospitals used to be notorious.

I have to chronicle additional deaths amongst the profession. I have had to report several suicides lately. To the latter must be added the case of a Scotch medical student—presumably insane—who committed a double murder and then suicide. Two deaths from accidental poisoning have lately occurred. One was that of

a well-known surgeon, Mr. James Shuter, M.A., M.B., LL.B., F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital. Mr. Shuter was a distinguished graduate of the University of Cambridge, a rising surgeon, and a popular and successful teacher. He seems to have by mistake swallowed about an ounce of a hypodermic solution of morphia (containing about forty grains of morphia) thinking he was drinking a saline draught he had prepared. Medical assistance was summoned, but was unavailing. The other death is that of a Brighton practitioner, Dr. J. M. Crombie, who died this week from accidentally taking an overdose of morphia. It is a singular fact that Dr. Crombie was the author of several papers on narcotics and anæsthetics and their administration. Dr. Crombie advocated the self-administration of chloroform for the relief of pain and invented an apparatus for the purpose. Dr. Crombie's invention cannot be said to have been favorably received by the profession, who naturally have no wish to encourage so dangerous a practice as the self-administration of anæsthetics. Dr. Crombie's own death adds yet another to the long list of unfortunate deaths from narcotics injudiciously administered, and evidently points the moral that too great care cannot be taken, even by experienced practitioners, in the administration of such dangerous remedies as narcotics and anæsthetics.

A subject which has excited great attention in the papers lately is an escapade of Drs. Ringer and Murrell, who published lately an account of some experiments with nitrite of sodium. The effects of the drug were stated in such exaggerated terms, and the poisonous qualities of large doses so obviously shown, that the paper attracted the attention of the lay press, where the natural comment was that such apparently useless experiments on poor hospital patients were cruel and unjustifiable. Thereupon, of course, followed the howl of the antivivisectionists. The matter has since been explained to the satisfaction of a committee at the Westminster Hospital appointed to investigate the conduct of Dr. Murrell. It is well that he has escaped so easily, as he is a promising young physician and a censure would have much damaged him. I hope though the lesson will not be lost either on him or Dr. Ringer, or, indeed, on the host of men who are experimenting with potent drugs. Dr. Ringer only contributed the experiments on animals to the present paper, but I well remember his experiments on patients in University College Hospital, some years ago, with jaborandi. I then thought that it was as unjustifiable as it was useless to repeat doses which had acted so violently as to give rise to most distressing symptoms. I asked myself why he would not try smaller doses when repeating the experiments. Perhaps Dr. Ringer thinks it makes it even to administer infinitesimal doses of other drugs to other patients.

Army and Navy News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 8 to December 15, 1883.

McKEE, J. C., Major and Surgeon. Assigned to duty as Medical Director, Department of the Columbia, G. O. 31, Department of the Columbia, December 3, 1883.

SHUFELDT, ROBERT W., Captain and Assistant Surgeon. Now on sick leave, relieved from duty in the Department of the East, and assigned to temporary duty in the office of the Surgeon-General of the Army. S. O. 284, par. 12, A. G. O., December 12, 1883.

Official List of Changes in the Medical Corps of the Navy, for the week ending December 15, 1883.

DEARBORNE, F. M., Surgeon. Placed on the retired list from December 10th.

HEFFINGER, A. C., Passed Assistant Surgeon. In addition to his duties at the Navy Yard, ordered to attend officers at Portsmouth, N. H.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 18, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 11, 1883.....	0	20	59	3	35	43	0	0
December 18, 1883.....	2	22	64	5	44	42	0	0
Deaths.								
December 11, 1883.....	0	4	8	3	6	28	0	0
December 18, 1883.....	1	3	6	4	13	21	0	0

THE EASTERN AND THE WESTERN PHYSICIANS AND THEIR RELATIVE ADVANTAGES.—Dr. J. A. Rafter, of Holton, Kansas, rather pointedly writes: "I have read with considerable interest the letters of Dr. Edmund C. Wendt that have appeared in the last three or four issues of your journal, in which he so well describes the different characteristics of the country and people of the great West and Northwest. I believe, however, that I voice the sentiments of nine-tenths of the profession of the West when I state that 'the impressions' of Dr. Wendt, from a medical standpoint, were hastily arrived at, and his deductions need many modifications. I think, still further, the tone of his letters are liable to make a false impression among the physicians of the East in regard to our professional attainments and standing. Several years' residence here, and something of an acquaintance among the profession, inclines me to the conclusion that Eastern and Western physicians differ but little, and that little is due to circumstances and surroundings. I have looked up the statistics, and as near as I can come at it, about one-half of the doctors practising this side of the Mississippi are graduates from Eastern schools, and usually of New York or Philadelphia. Now I state it as a fair proposition that until the graduate turns his face westward he is (other things being equal) standing upon about the same level as the one who locates in New York, and speedily becomes 'professor' or 'adjunct professor.' The practitioner here can quote from the lectures of Flint, or Loomis, or the venerable Alonzo Clark as readily. They can practice medicine as intelligently, and surgery as successfully, as practitioners of the same ability there can do. In the face of this we can hardly forgive Dr. Wendt for saying (let me quote from his letter): 'Our Western *confrère* has perhaps heard of the Code. In *rare instances he has even read it some*, that is the old one. But he cares very little for it, and about as much for the new.' After this rather surprising piece of intelligence comes the most astonishing statement of all, 'He rarely hesitates to meet his homœopathic brother.' Now, without wishing to be impertinent in the least, I most emphatically challenge those assertions. I believe we are moderately familiar with the Code of Ethics, and are satisfied with it as it exists. We are only too familiar with the disgusting jangles that have been enacted in the Societies of the State and County of New York, and in the Academy of Medicine, by men whose petty jealousies and grasping ambitions have gotten the better of their heads. We are not proud of them here, and I am not willing to allow a stigma to rest upon the profession

of the West without a remonstrance, when it was a thrust given through them by a code contentionist at those who possibly honestly differ with him nearer home. Neither do we claim kindred with pretenders, nor do we meet pretenders of *any kind* in consultation. We despise quackery, we despise deception probably as thoroughly as you do in New York. I will admit we are not as much given to recommending quack nostrums, but possibly the reason may be that we have no 'official position' to annex which will serve as an advertisement. We claim, and I think facts will justify it, that we are equal as practitioners to our Eastern brethren, and need not go to New York to learn 'differential diagnosis.' "

CAN WE SEPARATE MATTER AND FORCE?—Dr. F. A. Tuttle, of Jefferson, Ohio, sends the following very suggestive item: "Dear Sir—I see your London correspondent calls Maudsley the OLD name of materialist. Is force material? Can we separate matter and force? From the irritability of protoplasm up through reflex action, instinct, memory, reason, and will, are not the clustered nerve-cells always in proportion to the amount of mentality? Is it not humiliating to a thinking man working on a hypothesis, when puzzled, to call in the supernatural? We shall never learn how matter thinks, but is not the reign of law supreme there as elsewhere? Is not mind a phase of force? If not, why the need of constant supply of red, rich blood? Can we study this great question only with the inductive method? In an editorial a short time ago, reviewing Galton's inquiry into human faculty, you confessed you could not understand it. Neither can I; but the supernatural does not help us. It is just as easy for me to conceive how brain-cells think as to conceive how kidney-cells can eliminate poison from the blood. Where did they learn that strychnia and morphia are poison? How can matter taste, smell, or see? This *awful* mystery, could we understand it, is all founded on that one UNIT, the irritability of protoplasm; adaptation and heredity, working through the unchanging law of an all-wise Creator, tells the rest of the wondrous story. I do not know the ultimate nature of matter any more than I do the many phases that force may assume. Our profession must study the yet untold mysteries of insanity through the mal-nutrition of nerve-centres, as metaphysical moonshine has as yet afforded but little light to help us out."

WHAT IS MEANT BY THE SALE OF A MEDICAL PRACTICE.—The following statement of a recent English case, May *vs.* Thomson, appears in one of the legal journals: "The Master of the Rolls intimated the opinion, although the point seems not to have been decided, that a contract for the sale by a physician of his practice cannot be ordered to be specifically performed, as it is merely for the sale of a personal service, the vendor's introduction of the purchaser to the patients. He concedes that there is a good-will of an apothecary's business, or, as he called it, a 'doctor's shop,' meaning to include, doubtless, a physician who kept an office or shop where he sold to his patients the medicines he prescribed. The dictum does not throw any doubt on the assignability of a physician's practice, nor on the value of it, as a consideration for a promise to pay for the transfer, but only raises the nice question whether the Court would order the physician to perform such a contract, and enforce the order by process for contempt. The Master of the Rolls regarded the contract to introduce and recommend to patients as analogous to the contract of an actor or singer for his services, the performance of which the Court could not superintend."

VANILLISM.—A distinguished professor of the Faculty of Medicine of Bordeaux, Dr. Layet, has just read an interesting communication (*Lancet*) on certain injurious properties of vanilla, of which a satisfactory explanation has up to the present been wanting. The affections have been studied at a warehouse in Bordeaux, where on an average 25,000 to 30,000 kilogrammes of vanilla arrive every year. In these storehouses the pods are cleaned, sorted, and classed according to their quality. These manipulations seem to cause certain symptoms among the workmen and women. At first an itching of the face and hands, associated with a powerful smarting sensation, is experienced, and the skin becomes covered by a pruriginous eruption, swells, reddens, and desquamates at the end of some days. At other times there is a feeling of malaise with dulness, stiffness, and muscular pains, which oblige the worker to give up this kind of labor. The cutaneous malady seems to be due to an acarus which appears as a small white rounded body occupying generally the ends of the pod. This insect does not penetrate the skin like the acarus scabiei, but determines the affection by its mere contact. Probably the parasite is aided in its irritant effects by the presence of "givre" in the form of pale acicular crystals. The nervous symptoms M. Layet is inclined to put down to the manipulation of inferior pods of vanilla, containing much oily juice enveloping the seeds in the interior of the siliquæ.

CRITICISING THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.—A correspondent from Hartford, Conn., sends us a very severe criticism upon the typographical inaccuracies of the *Journal of the American Medical Association*, especially with reference to the number containing a review of the Proceedings of the Connecticut Medical Society, 1883. We believe that the editor has explained the cause of the trouble.

DR. E. D. COONLEY, not E. D. Coonby, was the name of the correspondent on page 637.

OPHTHALMOLOGICAL METHODS IN PARIS.—A correspondent of the *Orvosi Hetilap* writes from Paris that the most eminent representatives of ophthalmological science in the French capital are foreigners of German, Polish, or Greek extraction. Among these he considers Dr. Meyer to be rather conservative. Dr. Gabrowski, who has the largest *clientèle*, is very fond of abstractions of blood. He orders leeches freely in different forms of conjunctivitis. He treats phlyctenular ulcers of the cornea by instillations of pilocarpine. For cataract he employs the old flap operation, without iridectomy, having entirely discarded Von Graefe's method. He uses the latter's knife, however, and makes the flap upward. He has made a series of about ninety of these flap operations, but has not yet published the results. De Wecker performs keratotomy for ulcus corneæ serpens, and follows up the incision by instillations of eserine. For the latter he substitutes atropine if there is a recurrence of hypopyon. For superficial abrasions of the cornea he also orders a solution of pilocarpine to be dropped into the eye. In cases of serous iritis, he avoids atropia and employs subcutaneous injections of the alkaloid of jaborandi. The number of patients at his clinique is smaller than at Gabrowski's, but his operative material is greater. He extracts cataracts by his well-known modification of Von Graefe's method. He uses antiseptic precautions. After performing tenotomy for strabismus, he closes the conjunctival wound by a suture applied in such a way as to approximate the angles of the wound and not the sides. He claims that by this suture the sinking of the caruncle is effectually prevented. He prefers sclerotomy to iridectomy for glaucoma. If the disease returns in an eye which has been already operated upon, he incises the scar. This operation he terms cicatrisotomy. He still continues his experiments of forcibly stretching the optic nerve in case of atrophy. The most peculiar notion of De Wecker is certainly his substitute for the protective bandage in cases of corneal ulcer. It consists in an apparatus made of glass and shaped somewhat like an artificial eye. This being introduced behind the lids allows the patient to see, at the same time that it protects his cornea from the air and the contact of the lids.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 24, No. 26 NEW YORK, DECEMBER 29, 1883 Whole No. 686

Original Articles.

FUNCTIONAL DISEASES OF THE HEART.

BY E. P. HURD, M.D.,

NEWBURYPORT, MASS.

(Continued from p. 540.)

PART III.—CLINICAL.

THE following interesting observation, from a recent work by Lecorché and Talamon,[1] may be regarded as occupying the border-land between functional and organic diseases. This case is regarded as a "cardiac affection of nervous origin;" an example of heart strain, "without valvular lesion, the result of violent passion." It well illustrates the effect of powerful emotion in deranging the heart, and the concatenation of morbid phenomena—asthenia, palpitations, arythmia, asystolia, syncope (*vide* Parts I. and II. of this series).

Professor Lecorché prefaces this report with the following comments: "The cardiac troubles were the manifest consequence of violent emotions. The patient was a very choleric, excitable man; during the Commune he had a narrow escape from death by being shot, and his hair turned suddenly white from the terror which this occasioned; it was finally a fit of anger which determined the crisis of cardiac oppression which brought him to our hospital. We noted in this person the most complete arythmia—a veritable 'folie cardiaque;' there was, however, no notable hypertrophy; the heart was somewhat dilated. We detected no souffle, and there was no œdema of the lower extremities, and no pulmonary congestion. It seemed to be wholly a case of disorder of the cardiac innervation. At the same time this man was a prey to an orthopnœa as terrible as in the most advanced asystolia, with tendencies to syncope. Was there here a lesion of the myocardium? Has the arythmia ended in complete and permanent want of systolic power? We cannot say, nor can we be certain whether, in the event of his death, the autopsy would disclose any cardiac lesion referable to other causes than those of a moral or nervous character. This man had, in fact, been addicted at times to alcoholic excesses, and we know well that alcoholism entails arterial and cardiac degenerations. Hence it is that in questions of etiology the complexity of causes hardly ever, to an impartial mind, permits an absolute solution."

CASE I.—*A case of "forced heart" without valvular lesion; arythmia.*—Name of patient, J——, aged forty-eight; gilder; entered the Maison Dubois, February 6, 1879. Twelve years ago, after a drunken debauch, he had an unknown disease, referred by him to the intestines; was very sick; lost consciousness, remaining in this state four or five days. No other sickness; never had rheumatism.

Is very excitable and irascible. Has suffered great reverses of fortune. After the Commune he barely escaped being shot, and the alarm so affected his mind that he was insane for six months; his hair and his beard turned white from this fright. He never had previously suffered from any heart trouble whatever (whether palpitations or oppression), when, two months ago, as the sequel of a violent fit of passion, he was taken with an attack of palpitations and precordial distress. Since then this disorder has never left him, and the least fatigue or emotion aggravates it, and puts him out of breath. No œdema and no cough. Urine scanty and high colored.

Present condition.—The patient cannot lie down, either night or day, his breath is short and labored, and his speech quick and interrupted. The least movement increases the dyspnœa. Pulse weak, small, and irregular. The beatings of the heart are very irregular; sometimes they are slow, with prolonged pauses between each pulsation; sometimes precipitate, running riot, as it were, for eight or ten pulsations. The heart shock is very much diffused, and the area of cardiac dulness is greatly increased. The apex beats in the sixth interspace. There is no appreciable murmur, either at base or apex. No œdema of ankles. Pulmonary sounds are normal. No signs of congestion or œdema at bases. Urine scanty and loaded with lithates; free from albumen and sugar.

Treatment.—Digitalin, one granule night and morning. Morphia subcutaneously, *pro re nata.*

February 8th.—Dyspnœa continues, with paroxysms of suffocation. Great prostration; at times lipothymia. Feels himself "going." Weight in the precordial region, and painful throbbings. Heart beats heavily, striking the thorax with dull, massive blows. Pulsations disorderly, slow or rapid, feeble or violent, with pauses, intermittences; one series of beats trespassing on the succeeding series.

February 9th.—Has had a prolonged faint with loss of consciousness. Heart's condition as before—complete arythmia.

February 10th.—Patient has been removed by his family.

Remarks.—If the above explanation of the pathogenesis of this case be correct, then we are to believe that a strong nervous or "moral" shock may so disturb the nutrition and innervation of the heart as to cause functional disease of an alarming and protracted, if not permanent character. The supposition is, however, a tenable if not probable one, that in this patient, J——, alcoholism had induced atheromatous changes in the coronary arteries with fatty myocardium. As remarked in a former article, the functional diseases continually trench on the organic, and in the case of the former we are seldom privileged with an autopsy to clear up the diagnosis.

The following case, which came under my own observation while in practice in Canada, is one concerning which there can be no doubt, as the patient eventually recovered.

CASE II.—*Heart-strain from overwork.*—Patient, S. N——, aged thirty-four, married; farmer; residence, Shipton, Canada. Has always enjoyed good health. Parents and grandparents, brothers and sisters free from cardiac troubles.

History of attack.—One year ago (August 1, 1867) while at work in the hay-field mowing heavy grass, and trying to keep up with his hired men, he "felt something give way as if a blood-vessel had burst," became faint, and was obliged to cease work. It seemed, he said, as if his vital forces had left him. It was with difficulty that he walked to his house. From that time the least exertion brought on palpitations, faintness, and some degree of dyspnœa. On one occasion it seemed imperative that he should help secure a load of hay, but the attempt to use the pitchfork determined such a heart-pang and such

[1] Lecorché et Talamon: Études Médicales, p. 447. Paris, 1881.

oppression that he had to be carried to the house, and he did not leave his bed for several days.

About this time he went to Montreal and consulted the late Dr. Scott, who referred him to me, with the following note: "Mr. N—— has enlargement of the heart from overstrain. I have prescribed for him small doses of digitalis with tincture of chloride of iron. I would advise that this medicine be continued a long time; that he be much in the open air, but he must refrain from work. There is much dilatation, but the heart-muscle will thicken up, and he will be all right by and by if he will be patient and rest for a year or so."

This commended itself as sound advice, and I did little but urge that Dr. Scott's instructions be carried out. Mr. N—— seemed a stout, robust man, with a strong, regular pulse of 86 when not excited. The exertion of ascending a flight of stairs would run his pulse up to 120, with violent diffused throbbing and pain in the precordial region. Never had severe dyspnœa at night. Extremities warm; circulation did not seem to be notably impaired. Auscultation and percussion revealed an increase in the area of transverse dulness; apex in the fifth interspace, and nearly on a line with the nipple. There was no bruit with either sound of the heart, and no pulmonary congestion or œdema.

"At this date" (these notes were written August 3, 1868) "Mr. N——'s condition has materially improved, but he can do no work but light work, such as teaming, doing chores, etc. Is able to superintend his farming operations, has a fair appetite and digestion, sleeps well, and has no heart-trouble as long as he keeps free from excitement and does not exert himself. Takes no medicine."

I have not seen this patient since writing the above memorandum, but have several times heard from him, and understand that he completely recovered from his cardiac malady, being able in a few years to do as much work as at any former period of his life.

Remarks.—This was evidently a case of primitive dilatation of the heart from forcing of the myocardium by overwork; a compensatory hypertrophy followed, which thus far enables the heart well to fulfil its functions. Here, again, the barriers between the functional and organic are trespassed upon, if not overpassed, for dilatation and hypertrophy cannot be said to be strictly normal structural states.

CASE III.—*Long-standing dyspepsia, resulting in the symptoms of the forced heart.*—Mrs. A. C——, aged sixty-five, a dyspeptic valetudinarian. This patient has been continually under my observation for the past ten years. During all this time, and for several years previous while she was under the care of Dr. Cross, she has suffered from gastric troubles. Has not been altogether incapacitated for housework; appetite has been good, and she has been able to eat and digest sufficient food to prevent emaciation; but her dietary has been necessarily plain, and any overstepping certain limits has always been followed by severe retribution. Attacks of gastralgia, with palpitations, at first infrequent and readily relieved by simple remedies, became more and more frequent and severe, necessitating fasting for a day or two, and very gradual return to solid aliments. Since 1876 these attacks have been chiefly nocturnal, occurring about midnight; have been always attended with eructations of gas and liquids, and (what has distressed Mrs. C—— the most) violent palpitations, or complete rhythmical disorder. These attacks were generally relieved very promptly by a powder of bismuth, calcined magnesia, and charcoal, each ten grains, with a fourth of a grain of opium. The quantity of opium has been gradually increased to a grain.

October 1, 1883.—I have examined the heart of this patient more than fifty times, during the attacks and in the interval, and never detected any murmur, and till recently have always failed to detect any signs of dilatation. At present there is marked evidence of dilatation, an increased area of dulness being discoverable, with apex displacement. Mrs. C—— now suffers from frequent paroxysms of arythmia, with oppression in the precordial region and dyspnœa. There is no lung complication, and nowhere any œdema. The pulse in the interval of the attacks is steady and slow, seldom being more than 75. The arythmia is characterized by irregularity in the series of pulsations, with intermissions, pulsations following pulsations in the true style of the *folie cardiaque*, with long pauses between the series of pulsations. Nothing has ever seemed to relieve the patient but remedies addressed to the condition of the stomach. A strict enforcement of rigid dietary rules, with attention to the bowels, has always been followed by good results, with sometimes exemption from the nocturnal attacks of arythmia. She now takes at bedtime a little bromide with *chloranodyne* and digitalis; the digitalis is repeated twice during the day, in ten-drop doses of the tincture.[1]

CASE IV.—*False angina pectoris and palpitations in a hysterical person.*—Patient, Mrs. N——, aged thirty-five, widow. Father died of some heart disease at an early age; mother and several sisters died of consumption. Patient is of bad reputation; habits of life for several years irregular; her vicious conduct has impaired the nervous forces. One year ago she had a long sickness which kept her confined to her bed two months; it was pronounced hysteria by the attending physician.

Present condition.—Keeps her bed constantly; says that she is not able to move. When asked what is the matter with her, says that she is in the last stage of consumption; that she is dying of the same disease that her mother and sisters died of. If asked about her appetite, she replies that she has no appetite and has retained no nourishment for four weeks; this account is corroborated by the nurse, who declares that N—— vomits all food and drinks as soon as taken. "They are no sooner down than they are up again." She gets no sleep night or day, according to the statement of her attendants and her own asseveration. There is unimpeachable testimony that she coughs blood and vomits blood every day. She complains bitterly, when undergoing examination, that her chest is sore in every point.

The most thorough examinations, several times repeated, find nothing wrong with the heart and lungs. Her pulse is normal, and she has no fever heat. Despite the fact that she takes no food, she does not emaciate. Tongue is clean, and bowels are regular. Menstruates normally. There is only one diagnosis to make of this case, and that is the one word—made to cover so much ignorance—*hysteria.*

The interesting feature of the case for us now is the fact that she has frequent attacks of palpitations and cardiodynia, during many of which I have been present. The pain is very severe, radiating to all parts of the thorax, though never shooting down either arm; this is simultaneous with the palpitations. The pulse beats from 120 to 140 a minute, and the heart throbbings are intense. There is coldness of the surface and extremities. Acting on the supposition that there was vaso-motor spasm at the bottom of this disturbance, I have lately used nitrite of amyl during the paroxysms, and with

[1] December 3d.—Since writing this report (October 1, 1883) I have again made a careful examination of this patient, and detect a well-marked systolic bruit at the apex, indicating mitral insufficiency; there is also a diastolic murmur at the base. The long-persistent nutritive derangements of the organ, then, have terminated in valvular endocarditis with calcification of the aortic and mitral valves.

Here, then, is a clear case of functional, leading step by step to organic, disease. The concatenation of morbid phenomena is thus indicated by Clifford Allbutt (Braithwaite's Retrospect, Part 64, page 72): "1st, dilatation of the right heart; 2d, dilatation of the left heart; 3d, hypertrophy of the left ventricle, or of both ventricles; 4th, chronic inflammation of the aorta and aortic valves; 5th, dilatation of the aorta; 6th, incompetence of the aortic valves; with, 7th, further compensatory hypertrophy of the left ventricle; 8th, loss of compensatory hypertrophy, with consequent rapid failure, and often with consequent mitral regurgitation."

Dr. Allbutt is satisfied, from clinical experience and examination of the dead, that by sheer stretching of the chambers the auricular valves may become incompetent, but oftener the sequence of events is as above described.

In the case of Mrs. C——, the history points clearly to a long series of years in which the strictest examination, repeated almost weekly, failed to discover any signs of structural disease, albeit the functional disturbances were very frequent; when finally, as with progressing age, the failure in the nutrition and innervation of the organ become more decided, dilatation and rhythmical disorder became marked, yet no murmur was audible, till at last a double murmur becomes manifest. Here there is no previous history of alcoholism to explain the endocardial degenerations.

considerable benefit. She also takes glonoine internally, in drop doses three times a day of a one per cent. solution, and this is about all the medicine she takes, owing to the irritable stomach. This patient will in time get well, as she did last year when she had a similar attack.

November 20th.—The above notes were made September 30, 1883. I then considered Mrs. N—— the despair of therapeutics, but formed a hopeful prognosis. This patient appears now to be convalescent, and the remedy that is doing all the good—prescribed by an old woman who chanced to visit her—is *Horsford's acid phosphates*. We wonder at the results of metallotherapy (while in our hearts believing it a humbug), and here is something quite as wonderful as anything Mons. Burq has wrought!

CASE V. *Irritable heart; palpitations; incurable.*—The following case, reported by Dr. J. W. Corson in his "Functional and Sympathetic Affections of the Heart," will come under the head of "Nervous Palpitation."

"A female hat presser, aged thirty-five, unmarried, tall, muscular, apparently healthy, though suffering from want and poverty, in a damp basement, consulted me in 1848 for nervous palpitation of ten years' duration, and for which she bore the marks of counter-irritation while under ineffectual treatment some years previous in Edinburgh. The heart was natural in size and sounds, with a little precordial tenderness to the finger, *painful palpitations* more or less constant, increased by excitement, and accompanied by a smart knocking impulse. Under the use of preparations of iron, Fowler's solution, in combination with vegetable tonics, digitalis, hyoscyamus, conium, valerian, with mild counter-irritation, followed by the external application of belladonna, she continued for two years with slight palliation at times, but no permanent improvement, till at last she grew discouraged and discontinued treatment. A year or so afterward she died somewhat suddenly of pneumonia without affording the desirable opportunity of a post-mortem."

CASE VI. *Cardiodynia, palpitations, and arythmia from the use of tobacco.*—From the same paper of Dr. Corson, long out of print, I select the following interesting observation: "A highly intelligent friend, aged sixty-five, stout, ruddy, early married, temperate, managing actively his large business, after premising that he commenced chewing tobacco at seventeen, swallowing the juice, as is sometimes customary, 'to prevent injuring his lungs from constant spitting'—and that years after he suffered from a gnawing, capricious appetite, nausea, vomiting of meals, emaciation, nervousness, and *palpitation of the heart*, dictated to me quietly at his desk, recently, the following story:

"'Seven years thus miserably passed, when, one day after dinner, I was suddenly seized with intense pain in the chest, gasping for breath, and a sensation as if *a crowbar were pressed tightly from the right breast to the left, till it came and twisted in a knot round the heart, which now stopped deathly still for a minute, and then leaped like a dozen frogs*. After two hours of death-like suffering, the attack ceased, and I found that, ever after, my heart *missed every fourth beat*. My physician said that I had organic disease of the heart—must die suddenly—and need only take a little brandy for the painful paroxysms, and I soon found it the only thing that gave them any relief. For the next twenty-seven years I continued to suffer milder attacks like the above, lasting from one to several minutes, sometimes as often as two or three times a day or night; and to be sickly looking, thin, and pale as a ghost. Simply from revolting at the idea of being a slave to *one vile habit alone*, and without dreaming of the suffering it had cost me, after *thirty-three years' use* I one day threw away tobacco forever. Words cannot describe my suffering and desire for a time. I was reminded of the Indian, who, next to all the rum in the world, wanted all the tobacco. But my firm will conquered. In a month my paroxysms nearly ceased, and soon after left entirely. I was directly a new man, and grew stout and hale, as you see. With the exception of a little asthmatic breathing, in close rooms and the like, for nearly twenty years past I have enjoyed excellent health.'"

CASE VII. *Heart distrain and palpitation from exhausting mental application.*—We cite one or two more interesting illustrations from the same source:

"A friend, distinguished as a divine and author, aged about forty-two, after several years of severe application, in which he habitually studied till three or four o'clock in the morning, was at last greatly incapacitated for a long period by irritable palpitation of the heart. He was most relieved by a succession of blisters the size of a twenty-five cent piece over the heart, and rest with tonics, and at length nearly restored by a tour in Europe, mental relaxation, and more generous diet. Any great mental effort, however, still exhausts his stock of nervous energy and brings on irritability of the heart."

CASE VIII.—"A celebrated Methodist clergyman, of middle age, having by protracted and severe studies brought on irregularity of the heart, was obliged to suspend his labors, and was pronounced a victim to incurable organic disease by good medical authorities. In his retirement he was surprised by the opinion of a shrewd country practitioner that his disease was merely functional, and that he might with proper treatment gradually resume active work; and finding by a little experience the last opinion correct, in a few months he accepted the highest office in the church. He has since labored several years as bishop."

Dr. Corson alludes to the fact, of which I have had personal experience, and seen instances among my classmates, that "medical students exhausted by a winter session are apt to be special subjects of real or fancied irregularity of the heart."

CASE IX. *Arythmia and intermittences from tobacco.*—A. B——, of Salisbury, a cornet-player, consulted me during the past summer for cardiac disorder. When I first examined him, and during two subsequent examinations the heart's action seemed perfectly normal, except that there was now and then an intermission of four or five seconds between the beats, then the pulsations, a little precipitate and violent at first, became regular again. At the fourth visit there was marked arythmia of the kind described by Guttman, *i.e.*, after several regular strokes one stroke was omitted, and this was followed by complete disorder in the next series of five or six pulsations. A. B—— had been an inveterate smoker, this habit was at once discontinued. He was given digitalis, then cactus and convallaria with, however, little seeming benefit; sleep at night had long been interrupted, and he was now urged to go to bed regularly at nine o'clock, giving up his usual brass band exercise; digestion was disturbed, and an attempt was made to restore this function by dietary hygiene with muriatic acid and strychnia; for the constipation a morning dose of Hunyadi Janos was directed. The disordered rhythm of the heart was only an expression of the disordered rhythm of the other organic functions; the physiological processes had badly adjusted themselves to insalutary conditions, and it required an entire change of scene and of habits, a return to country and to farm life, and an utter abandonment of tobacco, before tolerable health was regained, and even now, when B—— is fatigued or excited, some slight cardiac irregularity is noted.

CASE X. *Dilatation, with failing heart from age, successfully treated by cactus grandiflorus.*—This case is imperfectly reported by Dr. O'Hara in *Medical News*, November 10, 1883. The patient, Mrs. L——, was sixty-five years of age, had vertigo, anæmia of the brain, dropsy, etc., all due to failing heart. Dr. O'Hara gave five minims of Parke, Davis & Co.'s fluid extract cactus grandiflorus every four hours to this patient, with marked relief of all the cardiac symptoms and probable prolongation of life.

CASE XI. *Intermittent pulse; dilated and failing heart;*

relief by cactus. (*Reported by Dr. O'Hara.*)—In a similar case, in which the diagnosis was "dilatation and failing heart, compensation gone by," digitalis, iron, and nux vomica had been given with no effect. The patient became swollen generally, had orthopnœa, suffered very much, heart becoming very intermittent on the least effort. He was going downward daily, and on June 22d ult. the pulse was very intermittent and only thirty-four beats to the minute; patient was very waterlogged in the lungs and over the whole body. Dr. O'Hara obtained a hint from Flint's "Clinical Medicine" as to the efficacy of the cactus in such cases, and ordered five-minim doses of the fluid extract (the preparation of P., D. & Co.) every four hours. In a few days every symptom improved, the dropsy disappeared, and he could lie down to sleep at night. He has been taking the medicine now for five months (the last month fifteen minims ter die) with marked benefit; the dropsy has left him; has rarely an intermittent pulse.

Remarks.—The above case is here reproduced, not because it is a well-marked instance of functional disease—there was a soft mitral systolic murmur, and Dr. O'Hara is inclined to regard the valvular incompetency as primary—but because it illustrates the *pulsus tardus* and *intermittences;* how the functional and organic shade into each other; and that practically we have to treat both forms by the same remedies.

Case XII. *Palpitations from anæmia; relief from iron and glonoine.*—This patient is an elderly woman (past sixty), residing on Unicorn Street, and living in abject poverty and wretchedness. Were it not for the meagre rations which she receives as a city pauper she would starve. She is very anæmic, and has many symptoms which would pass for hysterical.

The notable feature of this case is the frequent attacks of palpitation on exertion; these sometimes come on in the night-time from trifling causes. The nocturnal attacks are generally preceded and accompanied by tremblings of the limbs and coldness of the entire surface, indicating spasm of the vaso-motors. This spasmodic condition of the arterioles is undoubtedly the etiological antecedent of the cardiac disorder.

I am giving this patient perchloride of iron and glycerine, also three times a day one drop of a one per cent. solution of nitro-glycerine; a fifteen-grain dose of bromide at bedtime. I cannot control the dietary of this patient, or procure for her country air and all the benefits of a first-class sanitary residence, therefore I do not expect any lasting amelioration.

Case XIII. *Dilatation and failure of the heart; palpitations, anasarca; relief from digitalis and convallaria.*—Patient, Miss T——, a maiden lady, aged seventy, residing in High Street. This case is very similar to No. X. (vide supra). There is marked increase of area of cardiac dulness, but no murmur. Pulse generally normal, but exertion brings on palpitations. A notable feature of the case is the anasarca of the lower extremities, which pit, on pressure, as far as the knees. No lung complication, no dyspnœa accompanying the palpitations.

The failure of cardiac power, in fact, the gradual development of the symptoms of the "forced heart," is clearly traceable to the anæmiating and obstructing influence of cancer of the rectum. The case is loathsome in the extreme. The rectum is impacted with cancerous nodules, and there is almost complete constriction and obliteration of its upper portion, so that only liquid fæces can filter through. Here, then, we have an agency operating, like a cirrhosed kidney, to interrupt the circulation in quite an extensive mucous tract. This of itself is sufficient to overtax the heart, which, moreover, participates in the general constitutional cachexia and debility. There is nothing to be done but sustain the forces, and make the patient comfortable with anodynes.

I have prescribed digitalis, afterward convallaria, with benefit for the cardiac asthenia and dropsy. The most good was derived from the convallaria (ten-drop doses of the fluid extract of the flowers) which for some time gave exemption from the annoying palpitations, with marked diminution of the anasarca. The action on the kidneys was quite perceptible.

The preparation of the lily of the valley used was the fluid extract of Parke, Davis & Co., Detroit. I have no experience with any other preparation than that of the Detroit firm, who import all their convallaria from eastern Europe, believing that only the Russian plant is medicinal. Whether this be so or not, we do not seem to have as yet sufficient data for determining. If the European plant possesses medical virtues which the American does not, may we not in this fact find an explanation of some of the failures in the therapeutic employ of this drug which have lately been reported by certain practitioners in this country? It is worthy of remark in this connection that in some instances in which I have known the infusion of the native plant to be used, no results of any account were noted.

Case XIV. *Irregularity of the heart from lithæmia.*—The following case is reported by Dr. J. M. Da Costa in his "Nervous Symptoms of Lithæmia":[1] "A gentleman, forty-eight years of age, fond of intellectual pursuits, and leading the life of a student in addition to bearing the cares and anxieties of the responsible direction of heavy interests, has been, at least for twelve years, subject to attacks of vertigo which distress him and demoralize him. . . . The attacks are of about a minute's duration; he has had them at night, awakening him out of sleep; they are objective, and followed by dull headache. . . . Irregularity of the heart I found to be very common with him, the pulse some days intermitting every fourth beat, and on others only every twentieth. When these irregularities were most marked he would have rapidly-passing spells of oblivion, during which his mind was a blank, and he would stagger in his gait; he was gloomy and haunted by the idea that he was becoming an epileptic. The intellectual powers were always acute, but long spells of listlessness requiring strong will-power to force himself into exertion were not infrequent. . . . The urine often deposited lithates in abundance; specific gravity 1.020 to 1.024; often oxalates. . . . Slight sallowness of the skin and elevation of the temperature, not exceeding one degree, were occasional symptoms. The joints of the right hand were occasionally tender on pressure, pain in the toes, and so-called rheumatism in the leg were also at intervals observed. Lithæmia existed in the family. The father had suffered from similar symptoms, including the vertigo. A brother had the uric acid diathesis very marked, and had passed renal calculi of uric acid. A system of active exercise, shower-baths, regulated diet, produced very good results; but the cure was completed by a European trip, and the taking, while in Europe, of a course of Kissingen water."

There is no doubt that blood laden with the products of nitrogenous waste is a general irritant and a disturber of all the trophic processes of the economy. There is not one of the organic functions which may not suffer from lithæmia, a condition becoming more and more common as a result of our civilization, and which is, as Dr. DaCosta describes it, "a half gout which does not bring with it the pain, inflammation, and obvious swellings of the gouty paroxysm, but which works more silently, is characterized by the abundance of lithic acid or lithates in the urine, frequently coexists with signs of ill-assimilation of food, and with aches and pains unaccompanied by any perceptible changes of the aching part. Hepatic derangement is also often found, and from this end of the chain the links are stretched through many vague, almost nameless, symptoms to outbreaks of true gout, or to structural change in heart-vessels and kidneys."

That this kind of nitrogenous poison severely affects

[1] American Journal of Medical Sciences, October, 1881, page 315.

the nerve-centres, causing, on the one hand, vertigo, failure of the memory, and mental depression; and, on the other hand, the whole train of symptoms usually referred to spinal irritation (headache, nausea, pains in the upper and lower extremities and sides, gastralgia, dysuria, ischuria, etc.); that it also disturbs the vaso-motor centre, causing general or local spasm of the vaso-constrictors, hence embarrassment of the heart's action and palpitations, we infer from facts that are increasingly numerous. But no theory of this toxic action is complete which does not make account of the influence of lithiasis on the entire cardiac nervous mechanism, a problem for whose solution we have not the data.

Several severe cases of palpitation have, during the past year, come under my observation, which I saw good reason for referring to lithæmia. I have, unfortunately, not been able to follow out these cases.

CASE XV. *Palpitations from loss of blood.*—Mrs. B——, a widow lady, of Newburyport, forty-five years of age, suffered severely from metrorrhagia consequent on change of life, and was rendered thereby very anæmic. For some days after these attacks of flooding she was subject to palpitations, with precordial distress and a diffused knocking impulse of the heart against the chest; there was a bellows murmur and a jerking pulse. After the establishment of the climacteric these symptoms disappeared.

CASE XVI. *Hepatic congestion accompanied by palpitation.*—Dr. Hope "gives a very interesting case of a lady, forty years of age, stout, with intermission, palpitation, and oppression of a heart otherwise natural, and with constipation, succeeded by bilious stools and *enlarged liver*. Spare diet, and 'active mercurial purgatives, employed almost without intermission for two months, brought off an incredible quantity of dark-green and deep-orange bile.' Suspension of these aggravated the symptoms. In three months she enjoyed 'perfect health.'"[1]

CASE XVII. *Uterine disease; palpitation; recovery.*—I am once more indebted to Dr. Corson for the following case: "A lady, twenty-six years of age, having four months previously suffered much in an instrumental first labor, called my attention, in 1850, to palpitation, uneasiness, and a smart, knocking impulse of a heart otherwise healthy, accompanied by dragging pains about the loins. On examination with the speculum the vagina was slightly smeared with leucorrhœal discharge, and the os uteri was prolapsed, swollen, tender, and excoriated. Under the use of occasional applications, with a camel's-hair brush, of a solution of the nitrate of silver of ninety grains to the ounce; vaginal injections of a solution of extract of conium and tannin, alternated with cold water; twenty drops of a mixture of equal parts of the muriated tincture of iron and the tincture of hyoscyamus three times a day in a wineglass of sweetened water; porter, and beefsteak, she gradually recovered her health."

CASE XVIII.—*False angina pectoris in a gouty patient; relief by bleeding and nitrite of amyl.*—The following case from Dr. Lauder Brunton is cited by Huchard in a late number of the *Bulletin Générale de Therapeutique:* "A gouty patient was suffering from nocturnal attacks of angina pectoris, varying in duration from an hour to an hour and a half, and coming on between two and four o'clock in the morning. During the intervals digitalis, aconite, and lobelia were given without success; during the attack alcohol and stimulants produced little effect; chloroform momentarily calmed the pain. A venesection of three or four ounces and the application of wet cups brought relief. Thinking that the benefit derived from bleeding was attributable to consecutive diminution of arterial tension Brunton was prompted to employ nitrite of amyl, which lowers vascular tension. The patient was made to inhale five or six drops, and immediately with the production of redness of the face the pain disappeared. Generally the attack of the following night was 'nipped in the bud.' Sometimes a slight paroxysm came on five minutes after the disappearance of the first, but always yielded to the inhalation of a few drops of the amyl. The patient was eventually completely cured."

Dr. Huchard, in commenting on this case, makes this remark: "Lauder Brunton speaks of two kinds of angina pectoris; the one with sudden invasion, which rapidly disappears, whose duration is only a few minutes and is characterized by a sharp pain in the precordial region, the head, and the arm, with a feeling of approaching death; the other, in which the pain may be very intense, but with gradual invasion and rather slow disappearance, whose duration may be from several minutes to half an hour or more, and in which the sensation of approaching death is less accentuated, or even absent. It is useless to remark that the characters assigned by Brunton to the second variety of angina are those which I have attributed to the false anginas of the arthritic."

[1] Corson, in Boston Medical and Surgical Journal, February 1, 1854, page 22.

PREVENTION OF PUERPERAL INFECTION.

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MANY years before Pasteur, by his experiments with microbes, founded the germ theory of zymotic diseases, and before Lister, applying the theory to the treatment of wounds, revolutionized surgery, the theory that puerperal fever is due to infection was propounded, and a specific preventive treatment instituted to guard against it. In my paper on "Lying-in Institutions," published in the "Transactions of the American Gynecological Society," in 1877, I showed that as early as 1847 Semmelweis, of Vienna, acting on the principle that puerperal fever was due to infection with cadaver poison, introduced in one of the two departments into which the large Viennese Lying-in Hospital is divided, the use of chlorine-water for disinfecting the hands before any vaginal examination was made, and that he thereby brought the mortality down to a comparatively low figure.[1] Since that time the theory, divested of its exclusiveness, has constantly gained ground, but it was especially after Listerism had begun its triumphant march through the world, that a methodical antiseptic treatment was used as a preventive of puerperal fever. As far as I can find, this was first done in 1870 by Stadfeldt, of Copenhagen,[2] who used carbolic acid, and soon similar measures were more or less adopted everywhere. I myself have used carbolic acid regularly for the last eight years for my hands and instruments, for vaginal injections twice daily during the first week after delivery, for washing out the uterus when indicated either as a prophylactic or a curative measure, and for covering the genitals during the lying-in period.

So pleased was I with this treatment, that when I was appointed Visiting Obstetric Surgeon to Maternity Hospital I followed it there, and am convinced that it was of some value both in preventing and curing disease, but nevertheless it was far from satisfying the demand for an efficient antisepsis. In private practice it is comparatively easy to avoid infection if we take care not to cause it ourselves. A hospital is the true place in which to try the value of an antiseptic, and I doubt there are many places which present the conditions for a more crucial test than our New York Maternity Hospital, an institution which, properly speaking, does not exist at all except in so far that it has a medical board of its own, while in every other respect it is only a department of Charity Hospital—a large general hospital in which all diseases, medical and surgical, are treated. Seventy women or more, expecting to be confined within a period

[1] Semmelweis: Die Ætiologie, der Begriff und die Prophylaxis des Kindbettfiebers, pp. 61–63. Wien, 1861.

[2] A. Stadfeldt: Les Maternités, leurs organisation et administration, p. 12. Copenhagen, 1876.

varying from four months to a few days, occupy two "waiting wards." When labor pains set in, they are transferred to the "pavilions," two small wooden buildings, each of which contains two large and two small wards, but one of the large and two of the small are used as dormitories for the pupils of the training school for nurses. As soon as feasible the patients are therefore returned to the main building and placed in the so-called "convalescent ward," which accommodates twenty-four patients. When at times there reigned much disease in the pavilions, the whole service was transferred to a ward in the main building, where the results became still worse until the pavilions had been disinfected and could be occupied again.

As everybody would expect who knows how dangerous a place a general hospital is for lying-in women, the mortality has at all times been much greater than nowadays we find it in real lying-in asylums. Since the maternity service was brought in connection with Charity Hospital the mortality has been :

Year.	Deliveries.	Deaths.	Percentage.
1875	570	15	2.67
1876	536	20	3.73
1877	480	32	6.67
1878	225	7	3.11
1879	254	11	4.40
1880	149	8	5.37
1881	382	9	2.36
1882	431	14	3.25 [1]

While some of these deaths are attributable to diseases for which the hospital is not responsible, the great majority were the effect of hospitalism.

The present year will show as bad a record as any on the preceding list. Of 345 women delivered during the first nine months of the year, 30 have died, and, in order to avoid the appearance of throwing blame on others, I will add that I was myself on duty during the first three months, in which 108 women were delivered, 11 of whom died.

The bad condition of the hospital becomes still more apparent if we examine the frequency of disease after delivery. It used to be rather an exception than the rule to see a perfectly normal lying-in period. During the six months from October 1, 1882, to March 31, 1883, in which I was on duty last, 192 women were delivered, and 46 of these, or almost 1 in 4, were seriously sick, 39, or almost 1 in 5, of inflammatory puerperal diseases.

The special diseases are seen by the following table :

A. *Inflammatory puerperal diseases.*—(*a*) Diphtheritic vulvitis, colpitis, or metritis, 19 cases (3 of these developed peritonitis, 4 died). (*b*) General peritonitis, 10 cases (3 of them had diphtheritic inflammation, 7 died). (*c*) Metritis, 10 cases (6 of them had dissecting metritis,[2] none died). (*d*) Perimetric inflammation, 2 cases (local peritonitis, parametritis, none died). (*e*) Erysipelas, 2 cases (1 with mammary abscess, 1 with diphtheritic inflammation of the genitals, both died). (*f*) Pleuritis, 1 case. (*g*) Mammary abscess, 5 cases (1 developed gangrenous erysipelas and died).

B. *Non-inflammatory puerperal diseases.*—(*a*) Shock after Cæsarean section, 1 case (died). (*b*) Hemorrhage, 2 cases (died). (*c*) Cerebral hemorrhage during delivery, 1 case (died). (*d*) Mania, 1 case (recovered). (*e*) Uræmic coma, 1 case (died). (*f*) Eclampsia, 1 case (developed diphtheritic inflammation, recovered).

C. *Non-puerperal disease.*—Double pneumonia before delivery, 1 case (died).

When I again went on duty on October 1st of this year, the condition of the hospital was at its worst, nine women having died during the last month, and half a dozen seriously sick, puerperæ being left over from the preceding service, one of whom succumbed a few days later.

In the meantime, bichloride of mercury had begun to be praised as an antiseptic in surgical and obstetric practice. I therefore laid a detailed plan for its use in Maternity Hospital, and the Commissioners of Public Charities and Correction kindly furnished the apparatus and appliances requisite to carry it out. But not trusting in the sole effect of a yet untried antiseptic drug, I adopted several other measures, each of which may have contributed somewhat to the splendid results obtained.

The service was divided into two departments, one for the well, the other for the sick patients, each of which had its separate doctors, nurses, and utensils. Two large wards with accommodation for nine patients each, and a small one which shelters six, besides the delivery-room, were reserved for the first class; a large ward and two tents were destined for the sick puerperæ.

Rapid alternation in the use of the wards was insured by only keeping each patient eight days in the pavilions, and transferring her on the ninth to the convalescent ward. When the last patient in a ward has reached her ninth day, it is under all circumstances emptied, and if for some particular cause it is deemed desirable to make an exception from the rule, so as to keep a patient a few days longer in the pavilions, she is transferred to the ward used for the last confined women.

If a patient, either in the pavilions or in the convalescent ward, shows any sign of infectious disease, she is immediately transferred to the department for the sick puerperæ.

The doors between the wards were locked, and the chinks filled with tow and pasted over with paper. Doors leading to water-closets were furnished with springs, and the windows in the water-closets nailed so as to prevent them from being closed.

As soon as a ward is empty it is fumigated with sulphur—twenty pounds to the larger and fifteen pounds to the smaller wards. After that the windows are kept open day and night. The floor is scrubbed with soap and water, and subsequently with a solution of bichloride of mercury (1 to 1,000), and so is every piece of furniture, bedsteads, chairs, etc., and the beds are provided with fresh bedclothes and new straw.

In all the wards are placed large demijohns, filled with a solution of bichloride of mercury (1 to 1,000), which for brevity's sake is called *the* solution. For the hands it is used undiluted, or when the weather is cold, with the addition of a small quantity of hot water. For the patients it is mixed with equal parts of water, the temperature of which is regulated according to circumstances, so as to obtain a lukewarm solution for the skin, the vagina, and the uterus when the sole object is to clean them; or a very hot one for arresting or preventing post-partum hemorrhage.

When a patient is brought to the delivery-room she is given an enema and a bath as heretofore, but after that her abdomen, genitals, buttocks, and thighs are carefully washed with lukewarm solution (1 to 2,000). At least two quarts of the same fluid are injected into the vagina by means of a fountain syringe, consisting of a glass bucket, a rubber tube, and a straight glass tube, and in protracted labor these injections are repeated every three hours. The rubber sheet covering the delivery-bed is washed with the undiluted solution immediately before every delivery.

In order to limit the danger of infection by vaginal examinations as much as possible, no nurses are allowed to make any except the one in charge of the waiting ward and the head nurse in the pavilions, and even these are directed not to repeat them more frequently than they need for notifying the doctors. The latter are urgently requested not to introduce their finger into the womb in common cases, but to be satisfied with such information as is derived from abdominal palpation and the examination of the part presenting at the external os.

[1] These figures are taken from Dr. W. R. Gillette's Report for 1875, published in the American Journal of Obstetrics, Dr. Kitchen's and Dr. Estabrook's Reports to the Commissioners of Public Charities and Correction, and for the last two years from the written records of Charity and Maternity Hospitals.

[2] On this disease, see my articles in The New York Medical Journal, December, 1882, vol. xxxvi., p. 587; Archives of Medicine, April, 1883, vol. ix., No. 2; and THE MEDICAL RECORD, December 15, 1883, p. 664.

At the beginning of a labor doctors and nurses wash their hands in the solution, using soap and large, stiff nail-brushes; and if more than one patient is in labor at a time, the same precaution is taken before going from one to the other. Besides this, the hands are held for a minute or more in the warm solution, kept for that purpose in a particular basin at the side of the bed, every single time before the genitals are touched, and no other lubricant is used than the fluid adherent to the fingers, except in operations in which the whole hand has to be carried into the genitals, or the forceps is to be used. Then I use glycerine with bichloride of mercury (1 to 2,000), which I prefer to the carbolized oil or vaseline heretofore in use, because the glycerine itself possesses antiseptic properties which are still enhanced by the addition of the bichloride.

When the fœtus appears at the vulva a piece of lint, soaked in the solution, is applied to it, and kept there all the time, in order to prevent the surrounding air from being pumped into the vagina by the alternate progression and recession of the presenting part. After the expulsion of the child the genitals are kept covered with a similar compress.

The placenta is expressed by Credé's method, so that the accoucheur need not introduce his fingers inside the rima pudendi; and if in exceptional cases it becomes necessary to do so, the vagina is washed out with the solution; otherwise not.

Acting on the same principle, intra-uterine injections are only used when the hand or instruments have been introduced into the interior of the womb, or in case of the birth of a macerated child.

I never allow any part of the placenta or the membranes to remain in the womb. With good antiseptic treatment the introduction even of the whole hand into that organ is of no account compared with the danger of hemorrhage and septicæmia by leaving any part of the secundines behind.

The intra-uterine injection is given immediately after the removal of the secundines; a large amount of fluid is used (from two to six quarts), and it is taken so hot that the hand can just be held in it. For its administration I have had made a curved glass tube, fifteen inches long, a little over a fourth of an inch wide, with a large opening at the end and eight side-openings, all of which have well-rounded edges, and are placed on the last four inches of the tube. It differs from Chamberlain's by its small calibre, its open end, and the greater number of lateral holes. The small calibre I prefer because it enables me to use the same tube any time during the first two weeks, even after considerable contraction of the internal os has taken place. The opening at the end I take to be necessary in order to be sure to wash the fundus thoroughly, and the larger number of side openings insure the same effect on the side walls of the uterus. The perforated part of the tube being only four inches long, it is entirely within the internal os, which prevents a premature escape in the cervix.

Before the tube is introduced into the womb the vagina is thoroughly washed out, and during the passage from the latter to the womb the solution is kept running, so as to avoid the introduction of any septic substance from the vagina to the womb, and insure the exclusion of air.

When used immediately after confinement this tube is introduced between two fingers held in the cervix. Later in the lying-in period, if symptoms of inflammation are developed I place the patient on her back on a table and introduce Cusco's speculum, in order to be able to inspect every part of the vagina and the vaginal portion of the cervix, and be sure not to overlook any diphtheritic infiltration, the disease which has caused the greatest ravages at Maternity Hospital. A bed-pan is then shoved under the patient, and the tube introduced through the speculum after careful disinfection of the vagina. If no indication is found for intra-uterine treatment the douche is only applied to the vagina. After this little digression we will return to our supposed case of normal labor.

After the expulsion of the secundines the patient is washed with the solution and the vulva covered with a *dressing* consisting (1) of a piece of lint, six by eight inches, folded lengthwise, so as to be three inches wide; (2) outside of that a piece of oiled muslin, nine by four inches; (3) outside of that a large pad of oakum; and (4) the whole is fastened with four pins to the binder in front, and behind by means of a piece of muslin eighteen inches square, and folded diagonally so as to form a kind of boat, five inches in width, for the reception of the other pieces of the dressing.

This dressing is put on with the same care as we dress a wound after a capital operation, and renewed four times in the twenty-four hours, twice by the day-nurses and twice by the night-nurses. At the same time the parts nearest the genitals are washed with the solution. Before each washing the nurses disinfect their hands as before labor. Any substance, such as cotton, lint, etc., brought in contact with the genitals is beforehand thoroughly soaked in the solution. No vaginal injections are given, except in the rare cases in which the lochia become offensive. By the effective antiseptic treatment at the entrance, preventive injections become superfluous, and thus one great source of infection is avoided.

Four times a day the floors of the wards are sprinkled with the undiluted solution. In order to avoid the introduction of infection by visitors coming from people suffering from diseases which might endanger our patients, these are not allowed to receive any visitors as long as they are in the pavilions, a rule which even applies to clergymen, except in danger of death. Baptisms are performed outside the wards. It goes without saying that the doctors and nurses employed in the pavilions are forbidden to enter the wards of Charity Hospital or the dead-house. Unfortunately, a similar restriction in regard to hospital wards cannot be laid on those in the convalescent ward, since they are employed in Charity Hospital simultaneously.

The severe exclusion of strangers was deemed necessary as long as I did not know how much I could rely on the dressing. Since I have seen its admirable effects I have ventured to let a few doctors, under my personal control, visit the wards and witness operations, and it is my hope that in the course of time the institution may be used for clinical instruction on a larger scale, and thus a very serious lacuna in our medical education be filled.

The use of carbolic acid is restricted to the disinfection of metallic instruments, which is done with a five per cent. solution, all metals being corroded by the bichloride solution, and consequently weakening it.

The local effect of the dressing is to impart a whitish hue to the skin, a bright scarlet color to blood, and a yellow color to abraded surfaces. Mucous membranes lose somewhat of their slipperiness. The lochia are kept uncommonly sweet. Very few patients have complained of a little smarting, and in one there appeared a pustular eruption on the thigh near the genitals, both of which conditions were easily remedied by the application of a little glycerine. In no case has the dressing been abandoned. In one case a papular erythema appeared on the chest and above the knees, but as I have observed similar eruptions before the use of the bichloride, I do not think there was any connection between the two; so much less so, as the erythema disappeared in two days, although the dressing was continued. In no case has there been any general symptoms attributable to the drug. Some of the nurses complained in the beginning of sore hands, but inunction with glycerine obviates that.

All linen coming from sick women is immersed for at least one hour in the undiluted solution.

In the convalescent ward the dressing is continued as long as the patients are kept in bed. As soon as their

condition warrants it, commonly between the tenth and the fifteenth day after their confinement, they are discharged. Protracted cases of a non-puerperal character are transferred to Charity Hospital, and no waiting-women or helpers are allowed to sleep in this ward. By these different means the air is kept as fresh as possible, and room is obtained for new patients coming up from the pavilions; but it is very much to be regretted that lack of room does not permit a regular alternation, as in the pavilions, and that, on account of ventilators communicating with other wards, it is not practicable to fumigate this one. In this ward, as well as in the waiting ward, hands and instruments are disinfected as in the pavilions.

The effect of the described treatment has been wonderful. As by magic all trouble disappeared. Ninety-seven women have been delivered since its introduction, and not only has *none of them died*, but there has *scarcely been any disease* among them, and especially no trace of diphtheritic inflammation, by which we used to be persecuted. Up to this day we have only had six sick women: two had local perimetric inflammation, three metritis, and one eclampsia. None of them, with the exception of the latter, has been seriously ill, and yet we have had two cases of podalic version and a craniotomy. Of the six patients, three only had a rise in temperature; the eclampsia case had none, and two of the patients with inflammation had none; and yet the presence of the inflammation was sure enough as proved by the other symptoms, spontaneous pain, sensitiveness to pressure, and exudation. This lack of fever I can only explain by the perfectly aseptic condition in which the genitals were kept by the dressing, and in this respect it seems that our results are better than those observed elsewhere. Kehrer, for instance, claims only to have reduced the number of his febrile patients from two-thirds to one-third of the whole number of confined women. The pavilions are scarcely recognizable. Where we used to have offensive odors, feverish, prostrated or despairing patients, overworked nurses and despondent doctors, the air is pure, the patients look well, their temperature is normal, the nurses are cheerful, and the doctors happy.

I am particularly indebted to the house-surgeon, Dr. H. A. Leipziger, who with great energy and intelligence carried out my plan in all its details, and instructed the nurses in their part of the work, and what he began has been faithfully continued by his successor, Dr. D. P. Pease.

The bichloride of mercury presents great advantages over carbolic acid. First of all, it is a much more reliable disinfectant; next, it is not only free from odor itself, but it is an excellent deodorizer; it affects the skin of the accoucheurs and nurses much less; and even from an economical standpoint the new treatment is a great improvement. The oiled muslin costs $3\frac{3}{4}$ cents per day for each patient, and the lint a little over $4\frac{3}{4}$ cents per day,[1] but even this expense is a trifle compared with the cost of the quinine, morphine, and whiskey used in treating puerperal inflammations—not to speak of the great saving by the cheapness of the bichloride compared with carbolic acid.

In private practice I use the same treatment with slight modifications, substituting cotton for oakum, using the common rubber fountain syringe, or, if the latter is not at hand, even a Davidson's syringe, and having the dressing renewed only three times a day. Instead of the glass tube, which is easily broken in the obstetric bag, I use a tin tube with a large opening at the end. It has one advantage over the glass tube, viz., its flexibility, that allows it to bend according to circumstances, which I have found useful in cases of abortion. Metal is indeed corroded by the bichloride, but in private practice, where instruments are not used so often, where they are less frequently exposed to contact with septic matter, and where it is easier to disinfect them, this is of less importance than in a hospital.

It might be objected to this paper that the time in which the treatment has been tried is too short to form a final opinion of its value, but the change in the condition of the patients and the wards before and after its adoption has been so sudden and surprising that it must convince everybody who knew the institution before. Secondly, the same good results can only be obtained by the constant attention to all the details of the treatment, and since that depends on the good will and the firm conviction of many individuals, and the uninterrupted supply of the materials used for the dressing, there is always some danger that puerperal infection may again find its way to the hospital. Finally, reports from other places coincide with my experience.[1]

In conclusion I would state that, although I am convinced that the bichloride of mercury is in itself a better antiseptic than carbolic acid, I attribute our success in a great measure to the dressing, by which this drug is applied in such a way that no air gains access to the genitals without passing through the disinfectant.

137 West Twenty-second Street.

[1] A piece of oiled muslin, one yard wide, five yards long, costs $1.70; a pound of lint, fourteen inches wide, seven yards long, costs 75 cents.

SEVERE AND EXTENSIVE INJURY OF FOREARM, WITH RECOVERY.

By MEIGS CASE, M.D.,
WASHINGTON, D. C.

The extension of the railway system and corporate neglect to provide substitutes for hand-coupling has already created an army of men, who, with absent and crippled fingers, hands, and arms, are silent witnesses of the hardships of an indispensable vocation. A statistical exhibit of the number and character of these injuries would be interesting and valuable. The unpromising appearance of these cases usually suggests amputation, and it is believed that the undefined limitations of surgical enterprise too often permit it.

The illustration shows one of these injuries, as it was presented for treatment:

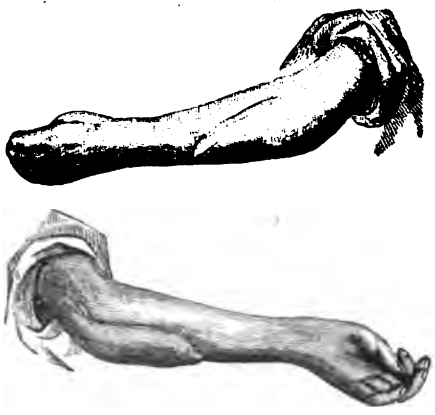
Thomas Lane, twenty-eight years of age, engaged in coupling a locomotive to a "gondola," was caught by the heavy iron bar, which was driven through his left arm, fracturing both radius and ulna, about one and one-half inch in front of the elbow-joint. An additional fracture of the radius in its middle third completely detached a four-inch piece, which lay transversely across

[1] Ad. Olivier, Tarnier's assistant, in Annales de Gynécologie, November, 1882, vol. xvii., p. 338; A. Toporski, Fritsch's assistant, in Centralblatt für Gynäkologie, September 1, 1883, vol. vii., p. 553; Wiedow, Hegar's assistant, ibid., September 15, 1883; P. Bröse, Schroeder's assistant, ibid., September 29, 1883; Paolo Negri, of Novarra, in Bulletin général de Thérapeutique, October 30, 1883, p. 373; Kehrer, of Heidelberg, Centralblatt für Gynäkologie, November 3, 1883, p. 709. It is Tarnier who first introduced it in obstetric practice, and that before it was used in surgery; but he uses it only during labor and in sick puerperæ.

the wound. Two other small pieces of loose comminuted bone were removed. The soft parts were crushed through near the radial attachment of the biceps, and nothing remained unsevered but a few fibres of the supinator longus and the extensor radialis longior. The weight of the forearm, thrown upon these thin attachments, and a band of skin less than two inches wide, permitted the most extraordinary downward displacement of the nearly severed arm. The patient said that he feared it would "drop off" before he got home. The median nerve was torn half across the ulnar artery, and the soft parts adjacent were crushed, and the wound filled with soot. The borders of the wound were twenty-three inches in length, and extended nearly around the arm, terminating at points opposite and not to exceed two and one-half inches apart. The brachio-radial artery was, however, uninjured, and he had a good pulse at the wrist.

I determined at once to give the patient the benefit of this fortunate circumstance, removed portions of crushed tissue, and carefully replaced the parts, and secured them by interrupted sutures. The whole was held in position by lateral splints of flannel and plaster-of-Paris, and the whole arm laid upon a pillow and covered with yeast poultices.

The venous hemorrhage was considerable during the first two days, and extensive swelling occurred with *sloughing* of the injured muscular tissue and bulging of the under lips of the wound. By the free use of nitric acid, this process was facilitated and controlled. There was no sloughing of the skin, and union by first intention took place in nearly one-third of the suture. At the expiration of ten days, the sloughs having disappeared, and the swelling greatly diminished, drainage-tubes were inserted from bottom to top, running through the centre of the arm. An opening was made for this purpose on the lower side, about three inches in front of the olecranon, and the entire arm surrounded by plaster-of-Paris bandage, with the exception of a half-inch opening for the drainage-tubes at the most dependent part.



The patient began to go about, and at the expiration of three months recovered, with some paralysis of the forearm and anchylosis of the elbow-joint; but he is able to carry a pail of water or handle a shovel and hoe as well as ever. The anchylosis at the elbow is slight, and could be easily broken up and motion restored.

The above illustration is taken from a photograph, and was made by direction of Dr. D. L. Huntington, Acting Surgeon-General of the United States, who has kindly suggested this publication.

November 7, 1883.

SIXTY BUSHELS OF PAMPHLETS, advertising a patent medicine, were received in the Boston Post Office last week, and were found, on examination, to contain also a circular advertising a Kansas lottery.

SOME FACTS REGARDING LARGE INFANTS.

BY W. P. BRECHIN, M.D. (HARV.),

BOSTON, MASS.

MRS. A——, primipara, aged twenty-two, five feet three inches in height, weight 127 pounds, was taken in labor November 1st, at 11 P.M. The pains continued with great violence until 1 P.M. the following day, when I was summoned.

On my arrival I found the patient very much exhausted and pains very weak. On examination I found the occiput presenting to the left, and the os fairly dilated. After waiting about two hours, and there being little or no advance, the forceps were applied, without ether and with but little difficulty. After a great deal of traction had been made, continuing for about one hour, I succeeded in delivering her of a very large male child, which I then estimated would weigh about 15 pounds. On the following day I went prepared to take the exact weight and measurements. The result was as follows: Weight, 18 pounds 6 ounces; length, 22 inches; biacranial diameter, 9 inches; circumference of thorax, 15½ inches; circumference of breech, 14 inches; circumference of thigh, 8 inches; circumference of arm, 5 inches; occipital mentalis diameter, 16½ inches; occipital frontalis diameter, 15½ inches.

The size of children at birth has been greatly exaggerated. Some are said to have weighed 24 and even 30 pounds, and to have been three feet in length. Cazeau states that in three thousand cases the largest weighed 10 pounds. Lachapelle states that of four thousand the largest weighed 12 pounds. Baudelocque records one that weighed 12¾ pounds; Merriman one weighing 14 pounds; Crofts one of 15 pounds. Owens records one weighing 17 pounds 12 ounces; extreme length, 24 inches.

Cazeau was called in consultation with Dr. Rimbault, and with great effort, after turning, succeeded in delivering a woman of a dead child, which weighed 18 pounds, its extreme length being 25½ inches.

Dr. Meadows reports a case in which the length of child was 32 inches and the weight 18 pounds 2 ounces, the child surviving but four hours. Dr. Rice, of Springfield, reports a case where the child weighed 20 pounds 2 ounces; extreme length, 23¾ inches; mentalis occipital circumference, 16¾ inches; frontalis occipital, 16 inches; around shoulders, 20¼ inches.

Dr. A. P. Beach, of Seville, O., who delivered the Nova Scotia giantess of a male child, reports the dimensions as follows: weight, 23¾ pounds; height, 30 inches; thoracic circumference, 24 inches; breech circumference, 27 inches; head circumference, 19 inches; foot, 5¼ inches in length. Six years previous she was delivered in London of a still-born child weighing 18 pounds and 24 inches in length.

As to the cause of children attaining such gigantic proportions, we can only say that it is a "*lusus naturæ*." Some have attempted to explain it by supposing that the child is carried beyond the normal period of gestation, but this view does not seem to be borne out by facts, for in these cases the child usually assumes pigmy proportions. Reasoning from analogy, I can see no reason why we cannot have giants in fœtal life as well as giants and liliputians in adult life. When we see children of such gigantic proportions born we are almost forced to think that craniotomy and embryotomy are often performed when there is no necessity for so doing. Why one physician should have so many craniotomies and embryotomies while others pass through a large and life-long practice without encountering a single case is, to me, inexplicable. I am acquainted with a physician who during his first year of practice had no less than six craniotomies, and if his cases have increased in the same ratio he must have ere this performed an astounding number. It seems as if there was a wanton destruction of infant life. If there is no deformity of the pelvis I

am borne out by facts when I say that any child varying from six to twenty pounds can be forced with safety through the pelvis.

The fact of not administering ether in this case was a great advantage to me, as the patient was able to give me a great deal of assistance. She made a good and rapid convalescence, the only complaint being a numbness alternating with pain in the lower limbs. The child at the time of its birth was apparently dead, but by the use of resuscitating measures it began to breathe. It continued cyanotic and died at the end of three weeks. These large children rarely do well; the greater proportion of them are dead when born, or survive but a short time.

A CASE OF CONGENITAL GOITRE CURED BY A SINGLE APPLICATION OF MERCURIC BINIODIDE.

By J. C. WORTHINGTON,

CAPTAIN AND ASSISTANT SURGEON U. S. ARMY.

I FIRST saw the patient, S. D. B——, a well-developed male infant, July 26, 1883, six hours after birth. The mother, a healthy woman, native of Prince Edward Island, and for a year past resident on her husband's ranche on the Uncompahgre River, Colorado, had had a slight goitre for over two years, the swelling having first been noticed during her previous pregnancy. The family was much alarmed at the appearance of the child's throat.

On examination I found a marked goitrous swelling, soft, but not fluctuating, on the right of the trachea. The tumor was as large as a hen's egg. I advised that nothing should be done until the child was three months old, when I would attempt to cure it by an external application, which I thought would not be advisable before that time.

I did not see the child again until November 12th, when it was brought to me by the mother for the treatment that I had promised. I found him a well-nourished baby, healthy in every respect except the deforming tumor on the right side of his throat, which had increased with his growth, and now filled the whole space between the chin and sternum on that side. His mother stated that the tumor now interfered with the child's breathing when he lay on his back. The flattening of the crown of the head, mentioned by Aitken, was now well marked. I confess it was with some misgivings that I prescribed for the child the treatment mentioned in Aitken's "Practice of Medicine," as having been attended with such wonderful success in India. I ordered the following:

℞. Mercuric biniodide ..... gr. x.
Lard ..... ʒj.
M. and S. Apply as directed.

I directed as follows: At ten o'clock A.M., on a bright sunny day, rub well into the skin over the whole tumor a lump of the ointment of the size of a filbert. Then hold the child, with the tumor exposed to the sun, at a *closed* window, as the weather was cool, for half an hour, then for an hour in front of a fire. At 2 P.M. of the same day repeat the application, and expose to the sun and fire as before.

On November 28th the child's mother brought him to me—cured. She stated that the treatment had been carried out as directed on the 17th, except that the exposure to the sun in the afternoon had been for less than thirty minutes, on account of its being so painful to the little patient. That he had had much pain and cried a great deal the following night; that the skin had become very red and had peeled off wherever the ointment had touched it; that she thought the next day the swelling seemed smaller, and on the 20th—three days after the application—the tumor was almost gone, and had grown smaller ever since until it entirely disappeared. When seen November 28th—eleven days after the application—there was no evidence of cutaneous irritation, and the thyroid gland was just perceptible to the touch, as in a normally formed infant. The cure was complete. No salivation or other indication of constitutional effects of mercury occurred.

CANTONMENT ON THE UNCOMPAHGRE, COLORADO,
December 1, 1883.

Progress of Medical Science.

THE TREATMENT OF FÆCAL FISTULA OF INFLAMMATORY ORIGIN.—Dr. B. Riedel has lately recorded (*Centralbl. für Chir.*, No. 14, 1883) two cases of fæcal fistula of inflammatory origin treated with success by operation. Fæcal fistula of such origin, being of much less frequent occurrence than fistula resulting from strangulated hernia, has not, he points out, engaged the attention of surgeons so much as the latter variety. Dr. Riedel states that in neither of his cases could the starting-point of the lesion be clearly made out. As there was no indication of previous intestinal disturbance, it cannot be assumed to have been typhlitis. Although the view of a glandular origin might be opposed by the fact that no lesion was observed on the lower limbs or on the genitals, still Dr. Riedel is disposed to think that the abscesses in these two cases, as in many instances of acute psoas abscess, really started in suppuration of some pelvic glands; and it is suggested that this glandular mischief may have been started by abrasion or fissure of the mucous membrane of the anus. Such pelvic abscess may burst at an early date into the gut and the pus be discharged by the rectum, whilst the passage of fæcal matter into the cavity of the abscess may be prevented by a valvular disposition of the margins of the intestinal opening. In the first case, the fistula had at one time remained closed for two years, although during this period there remained a large opening in the wall of the intestine. This opening must during this time have been hermetically closed by the firmly applied superjacent skin. In dealing with the fæcal fistula of inflammatory origin Dr. Riedel exposes the seat of perforation, sets free the affected portion of intestine so as to be able to drag this to the surface, and then closes the orifice by sutures. He doubts whether the peritoneal cavity was opened in either of his two cases. No loops of smooth intestine were observed. Probably around the seat of the fistula in each case there had been formed, between the intestine and the abdominal wall, thin membranous adhesions which allowed the perforated portion of intestine to sink back into the abdomen, and yet prevented the passage of fæcal matter into this cavity. In Dr. Riedel's cases, the conditions for the success of his operative treatment were favorable, as the adhesions between the intestine and the anterior abdominal wall were of slight extent. In an instance of wide union of these structures it would be necessary to have recourse to resection of the perforated portion of intestine.

NERVOUS CORYZA.—Dr. Joseph Herzog relates the case of a young lady, of nervous temperament, and coming from a nervous family, who suffered nearly every day from sudden paroxysms of sneezing. The nasal mucous membrane became swollen and the nose was stopped up; there was a serous, and sometimes later, a purulent discharge from the nostrils, lachrymation, and diminished sense of smell; the face became flushed, there was frontal headache, ringing in the ears, and sometimes a burning sensation in the throat and external ear. The entire attack lasted only two or three hours, and was usually shortened in its duration if the patient placed herself with her back to the fire. During the menstrual periods the attacks were more severe and the discharge from the nose very profuse. Nothing abnormal was to be discovered in the throat or nose during the intervals between the attacks. The injection of a weak soda solution into the nostrils was ordered, while internally arsenic, in increasing doses,

was exhibited with good effect. The author observed the same condition, which he denominates *rhinitis vasomotoria*, in a child two years old. The child usually took a nap in the afternoon, lying in a hammock in the garden, and whenever he did so, would be awakened by a strong fit of sneezing accompanied by a nasal discharge, lachrymation, and all the other symptoms of severe coryza. The attacks lasted about two hours, and did not occur if the child was put to sleep in the house. Dr. Herzog regards the affection as a vasomotor neurosis, and thinks that it arises in individuals of nervous disposition in consequence of some peripheral irritation, which, by reflex influence, excites the vasomotor nerves of the nasal cavity to greater activity. As a consequence, there is increased afflux of blood to the parts, giving rise to swelling of the mucous membrane and increased secretion. The author states incidentally that hay-fever is also a nervous coryza, and that the asthma accompanying it is of reflex origin. The treatment consists, locally, in the application of any of the commonly employed remedies. Internally, the author recommends the vasomotor remedies, aqueous extract of ergot (9 to 13 grains per diem in pill form), atropine, and especially Fowler's solution (3 to 10 drops three times a day). Other drugs may be used, as quinine, cannabis indica, iron, zinc, bromide and iodide of potassium, and the salicylic preparations. Sea-baths, cold water applications, and electricity may sometimes be of service.—*Allgemeine Medicinische Central-Zeitung*, October 24, 1883.

Changes in the Inferior Vena Cava occurring with Cirrhosis of the Liver.—The study of œdema of the subcutaneous connective tissue in cirrhosis, and the thereby induced belief that this œdema could not be explained wholly by the mechanical conditions existing in the liver, led Dr. de Giovanni to examine particularly the condition of the vena cava in this affection. These investigations disclosed the fact that the œdema in question was owing chiefly to disease and consequent disturbance in function of the vena cava ascendens. He found peri- and endo-phlebitis, thickening of the adventitia, hypertrophy of the entire wall of the vessel, and increase in size of its lumen. In one case of cirrhosis of the liver in which, notwithstanding there was meteorism and marked ascites, no œdema was present, he predicated the absence of disease of the vena cava, and the correctness of his assertion was confirmed at the autopsy.—*Centralblatt für Klinische Medicin*, October 27, 1883.

Tuberculosis with Asthmatic Symptoms.—Certain forms of tuberculosis are, according to Professor Germain Sée, difficult of diagnosis because of the fact that the most prominent symptom is the frequent occurrence of attacks of dyspnœa simulating very closely ordinary asthma. The recognition of this form of phthisis is all the more important, since between true asthma and tuberculosis there exists an antagonism by reason of the atrophy of the alveoli and destruction of the capillaries consequent upon emphysema, thus opposing a barrier to the development of tubercle in the lungs. The following are the chief points of value in the differential diagnosis: True asthma occurs usually at night, manifesting itself in sudden oppression of breathing, difficult inspiration, and sibilant expiration, and at the termination of the attack there is a peculiar expectoration. The return of the paroxysms in each individual is always accompanied by phenomena of a remarkable sameness and peculiar to that patient. These precursory phenomena are most frequently a nasal catarrh with the anomalous sensations resulting from it, tympanitic swelling of the stomach and intestines, diuresis, or a change of character in the individual, with an inaptitude for work. Nothing of this kind is seen in the dyspnœa of tuberculosis. Almost always the attack is brought on by some exertion, quick walking, going up-stairs, rapid muscular movements, or the effort of severe coughing, or repeated vomiting. It occurs usually in the daytime, the patient seeks repose and generally obtains relief by lying on the back. There is no whistling expiration, the respiratory movements are increased, but at times there is no such marked distinction. The pseudo-asthmatic paroxysms may be clearly intermittent, may occur at night, and may be followed by catarrhal symptoms. The liability to error in such cases is all the greater, since the general condition of the patient is usually so good as not to give rise to a suspicion of tuberculosis, and it is only by studying the general and physical symptoms with great care that we are able to arrive at a correct diagnosis. The asthmatic form of tuberculosis is of very slow growth. The general symptoms are slight and the patients often preserve their digestive functions unimpaired for years. They have but little fever and only a moderate cough; the expectoration, though muco-purulent, is not abundant. The general condition, indeed, is so good that it is often an occasion of surprise to find at the apices the evidences of sometimes pretty extensive tubercular infiltration. The prognosis is fairly favorable, yet, as in other forms of tuberculosis, it should be based partially upon the state of the digestive organs.—*Revue Médicale*, October 20, 1883.

Action of Tobacco on the Temperature and Pulse.—Dr. Troitski has made a number of observations upon the effects produced on the temperature and pulse by smoking. He found that in every case, varying according to the condition of the individual, there was an acceleration of the pulse rate and a slight elevation of temperature. If the average temperature of non-smokers were represented by 1000, that of moderate smokers would by 1,008, and while the heart in the former case was making 1,000 pulsations, in the latter it would beat 1,180 times. It is in the latter effect that he thinks the danger of tobacco smoking is manifested.—*Journal de Médecine de Bruxelles*, vol. lxxvii., 1883.

The Technique of Massage.—Dr. Benster summarizes the method of practising massage, followed by the French, as follows: 1. *Effleurage*, gentle friction, consists in making long, gentle, centripetal strokes along the course of the veins and lymphatics with the oiled hand. The pressure is intermittently firm and gentle, so made as to produce a sort of passive peristalsis. 2. *Massage à friction*, the rubbing stroke. This is accomplished by making elliptical strokes perpendicularly to the long axis of the limb with the finger-tips of one hand, while the fingers of the other hand pass from above downward, parallel to the axis of the extremity. A subdivision of this class is the *massage par ondulation*, as used by Laisné in lumbago. *Pétrissage*, kneading, is made always in a direction from the periphery toward the centre, and in such a way that the morbid tissues are seized by the hand, raised up and kneaded. This is employed in œdema of the skin, infiltrations into the subcutaneous connective tissues, and on muscles which have lost their pliability through infiltration, inflammation, or contractures. 4. *Tapotement* consists in a tapping or beating of the diseased parts by the finger-tips, the hollow hand, the side of the hand, the fist, the percussion hammer, or a little rubber ball fastened to a piece of whalebone. This is employed chiefly in neuralgia.—*Wiener Medicinische Wochenschrift*, October 27, 1883.

Dirt Simulating Ichthyosis.—Dr. C. Mettenheimer saw an old maiden lady, aged eighty-seven years, whose foot and outer side of the thigh were covered with brown, polygonal, horny scales, from a half to one inch in thickness, resembling the hide of an alligator, and which might well be taken for ichthyosis. They were, however, composed of nothing but old, so to speak, crystallized dirt, which, as the reporter learned, had been accumulating for twenty-five years. Warm water, assisted by a weak solution of caustic soda, brought about a cure. The scales dropped off and disclosed to view the perfectly normal integument.—*Schmidt's Jahrbücher*, October 17, 1883.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

PUBLISHED BY

WM. WOOD & Co., Nos. 56 and 58 Lafayette Place.

New York, December 29, 1883.

THE REPORT OF THE SURGEON-GENERAL OF THE U. S. MARINE HOSPITAL SERVICE.

THE annual report of the Surgeon-General of the Marine Hospital Service for the year 1882–3, is a larger document than usual, and contains a good deal that is suggestive and interesting.

We learn that during the past year 40,195 persons received relief from the Service, 13,356 being in-patients. The number of deaths was 502, or somewhat over one per cent. of the total, and less than four per cent. of the in-patients. In the list of diseases we observe the prominence of syphilis, of which over three thousand cases are reported, with a mortality of only nine. The working sailor appears to have a low mortality-rate, if we exclude the losses due to accident and shipwreck. One-half of the deaths are due to general diseases, including especially phthisis and the fevers. The remainder are due to various local diseases, especially those of the respiratory, vascular, and digestive systems. Out of 502 deaths, four per cent. were due to injuries.

The Marine Hospital Service embraces a *clientele* of about 100,000 seamen, who pay a tax of forty cents a month. This tax gave an income of $415,945.80 last year. The expenditures, on the other hand, were $469,966.21, this sum including, however, about $35,000, which was expended for extraordinary repairs and alterations.

This amount of money, though very large, is not excessive, but the contrary, when it is considered that the patients are treated at over ninety different ports and in more than a dozen different hospitals. A bill is now before the House to reduce the hospital tax to twenty cents. If this is done, Congress must make some provision to prevent a deficit. In fact, if the policy is continued of using the officers of the service, paid by the sailors, for purposes of national quarantine, then the Government ought to pay its share.

One is especially struck with the rapid increase in the annual amount of medical and surgical work. This has increased from ten thousand cases annually, a few years ago, to the present number, forty thousand. At such a rate, the Service will have in ten years to enlarge greatly its working capacity. We are of opinion, however, that in time there will be a more discriminating limitation of those who should pay hospital dues. In justice it should only include those seamen who have no legal residence or home, who are truly wards of the nation. Travelling workmen on the river vessels really seem to have no more claim on the tax-money system than travelling salesmen.

The demand for entrance into the Marine Hospital Service is yearly becoming greater. Thirty-seven applications were made for position as assistant-surgeon last year. Nineteen candidates were examined and five passed. The examination of pilots for color-blindness has continued and there is now no objection to this useful practice. The Surgeon-General wisely urges that the examination should be made to cover acuity of vision and also the sense of hearing.

The subject of the physical examination of seamen previous to shipping is also touched upon, and the recommendation is renewed that there shall be a compulsory physical examination of all of this class. This is of especial importance to those who are about to go on long voyages. The examinations thus far made show that about four per cent. of those applying for shipment are unfit for active service.

Dr. Hamilton devotes a few pages to the subject of national quarantine. His views in brief are that our country needs a maritime quarantine, and that the United States can and should render service in making this efficient. The duty of the general Government ends, however, under existing laws, with maritime quarantine. Local port sanitation and internal quarantine belong to the States and municipalities. An account is given of the quarantine work of last summer and the claim that the exertions of the Service were largely instrumental in keeping out yellow fever are no doubt correct.

The usual tables showing the medical work of the year are given. These could be studied to much better advantage if the statistics were tabulated as a whole as well as by districts.

To the report proper is appended a considerable number of medical and surgical contributions illustrating the work of the medical officers. There are also elaborate reports of the Mexican-Texas Yellow Fever Epidemic, by Surgeon Robt. A. Murray, and of the Florida Epidemic, by Dr. Jas. S. Herron.

FALSIFYING THE RETURNS.

WE have been asked to refer to a practice which has long existed among our medical charitable institutions, and which is fast doing injury to them in the eyes of the public. It is that of "falsifying the returns," so as to create the impression that a greater amount of work is done than is actually the case. For example, a dispensary reports that it has treated ten thousand cases during a single year. The facts are that the real number treated is about one-fourth or even one-half less. It is a very common custom in dispensaries to give a patient a ticket which lasts a month; when the month is ended, if the patient is still under treatment, a new ticket is issued and the patient is counted again. The number of cases treated is also increased (on paper) by other means. The object of these practices is twofold. The public is appealed to with additional force by these deftly manipulated statistics. For to say that "twenty thousand poor sufferers have been substantially relieved" is more emphatic than to speak of only ten thousand. Again,

the charities of the city receive pecuniary aid from the city in proportion to the amount of work done, and the more patients the more money.

We do not mean to charge the managers of our dispensaries with intentional dishonesty. The practices alluded to are common to nearly all, and are doubtless known by the city authorities. It would be hard for one institution to attempt reform if the others failed to follow its example. None the less is the practice a discreditable one, and we earnestly trust that there will be an attempt made to end it. We might add here that charities other than medical do substantially the same thing, and exaggerate their work for the sake of engaging the public sympathy and getting more of the public money.

VETERINARY MEDICAL ORGANIZATION.

FOR the past year there has been a great deal of organizing activity among American veterinarians, and State Veterinary Associations have been formed in nearly all of the Western and Middle States. This activity is the result largely of the enterprise of a very wide-awake Chicago quasi-professional veterinary journal. The organizing work progressed very smoothly until it reached this State, since which time there has been trouble. It appears that the Western veterinary editor wished to create a new State association here under similar auspices with those of other States. Unfortunately, there was a State society already existing; a feeble thing to be sure, but with enough vitality to protest against extinction. The result is, as we are informed, that two State societies now nominally exist, with reciprocal ill-feeling between them.

Nor is this all. The movement to organize veterinarians assumed finally a national aspect, and a call was issued to form a United States Veterinary Medical Association. This call was responded to and a society has been established, as was noticed in THE RECORD. It happens, however, that a national association of the same kind was already in existence, and had been for a number of years. The fact that this society was ignored has naturally produced much dissatisfaction.

As matters now stand, therefore, American veterinarians, though organized, are not harmonious, the factions being led by rival journals. There is doubtless some blame attached to both parties; that of the West has been somewhat obtrusive and uncomprising, while the older party in New York was a poor specimen of the kind.

We trust that the agitation will result eventually in improving the status of comparative medicine. There is not yet any great opportunity for organizing useful scientific societies, since the total number of educated veterinarians in the United States is probably less than a thousand.

GERMS AND GERMICIDES.

OUR forefathers of the good old fox-hunting and gourmandizing kind lived upon high mutton, venison, and birds, and devoured millions of germs in their well-ripened cheese. The same happens to a greater or less extent now. It could not have been the port wine and brandy which killed all these germs, for some forms of bacteria will live in alcohol for months. They must have been destroyed by the acid gastric juice which these active, out-door-sport-loving squires were furnished with. It is well known that food in a state of partial decay has this process arrested in the healthy stomach, and indigestion goes on as sweetly as if the food had been very fresh. Now, if putrefaction is caused by bacteria, either the pepsin must attack and digest them, or the acids of the stomach kill them. It is supposed that the germs of typhoid fever and cholera are not generally operative until they reach the lower portions of the small intestine, where the secretions become alkaline. In short, that most healthy persons will escape the effects of these poisons, when taken in their food or drinking-water, provided the stomach is in full digestive operation, or the quantity of the living poison be not so great that some of it escapes into the small intestine before it can be killed or digested. Cholera- or typhoid-water or milk drunk into an empty stomach by thirsty souls is especially dangerous. It has required Koch's almost unrivalled skill to prove that cholera bacteria, which have long been known, are merely more abundant in the small intestine and only penetrate farther into its coats than ordinary bacteria.

Nedwetsky proved, as far back as 1872, that cholera-bacteria were not killed by quinine, camphor, carbolic acid, calomel, or chloral; that opium, nux vomica, and chloroform destroyed them very slowly, while the dilute acids, sulphuric, nitric, and muriatic, decompose them very quickly, as did tannic acid, sulphate of iron, and chlorine water; also corrosive sublimate, bromine, and iodine. But perhaps milder remedies may have the same effect; at least one per cent. of tartaric acid will kill the yeast plant, but allow bacteria to thrive, while a five per cent. solution will allow mouldy growths to appear; or a stronger solution will kill both these and bacteria. It is known that yeast plants, moulds, and bacteria feed upon each other, but that bacteria will destroy or eat up all the others. One part of corrosive sublimate in 20,000 of water will kill bacteria in ten minutes; 1 part in 5,000 is a certain disinfectant, and of course as safe as stronger solutions of the milder tartaric acid. But sulphurous acid, generated by burning sulphur, which is the most commonly used disinfectant, requires thirty minutes to kill bacteria, and their spores will sometimes live for ninety-six hours. A five per cent. solution of carbolic acid requires twenty-four hours, and a three per cent. will not kill them at all. A five per cent. solution of chloride of zinc requires one month, and they have even been found alive at the end of that time. Iodine, 1 part to 5,000 of water, destroys them; and bromine, 1 part to 1,500 of water. Chlorine water requires two days, and a five per cent. of chloride of lime, ten days. Benzoic acid, benzoate of soda, chlorate of potash, and quinine, which have been vaunted as specifics, have little or no effect upon them. Bacillus spores will germinate after lying for months in absolute alcohol, but a small quantity of acid will kill them. Carbolic acid is not an acid, but an alcohol. Alkalies rather seem to favor their growth. The oils of mustard, peppermint, turpentine, and cloves, even in dilute solutions, have a restraining influence upon bacterial development. We understand that experiments

are being made with turpentine as a disinfectant and curative in diphtheria. The simple mineral acids may be better than the muriate tincture of iron, and tartaric acid may turn out as good as any; but large doses of pepsine, with dilute muriatic acid, are not to be forgotten.

News of the Week.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.—At the regular annual meeting of the Northwestern Medical and Surgical Society of the City of New York held on December 19, 1883, the following officers were elected for the ensuing year: *President*—Dr. Ed. C. Harwood; *Vice-President*—Dr. T. H. Burchard; *Secretary and Treasurer*—Dr. J. Henry Fruitnight.

LAPAROTOMY FOR HEMORRHAGE IN TUBAL PREGNANCY.—Dr. C. K. Briddon of this city writes: Dr. J. C. Reeve of Dayton, O., has drawn my attention to the following extract from the *Amer. Journal of the Medical Sciences*, April, 1879: "Dr. Veit (*Deutsche Zeitschrift für Prakt. Med.*, No. 49, 1878) says that about one-fifth of the cases of hæmatocele are due to rupture during tubal pregnancy, and that the latter is more frequent and capable of a more favorable prognosis than is generally supposed. In the rare cases in which an early diagnosis of tubal pregnancy can be made expectant treatment is indicated. When rupture occurs an attempt must be first made to arrest the hemorrhage by external means; and as a last resource, laparotomy must be performed, although it does not afford a very good chance. The method of arresting hemorrhage will vary in different cases. Sometimes it will consist in the application of sutures, sometimes in removal of the sac, etc. Dr. Veit performed laparotomy on a moribund patient to arrest the hemorrhage produced by rupture in tubal pregnancy. The Fallopian tube was tied, the sac sewn to the lower angle of the wound, and plugged with salicylized cotton-wool. After two days, plastic peritonitis set in, of which the patient died sixty-four hours after the operation.—*British Med. Journal*, Feb. 15, 1879."

ARMY MEDICAL DEPARTMENT.—The following gentlemen have passed the Army Medical Board: William D. Dietz, of New York; William Stephenson, of Maine; John L. Phillips, of the District of Columbia; William C. Borden, of the District of Columbia; Guy L. Edie, of Virginia; Wiliam L. Kneedler, of Pennsylvania; Charles S. Black, of New York; Alonzo R. Chapin, of Illinois; Walter R. W. Fisher, of Virginia; Adrian S. Polhemus, of New York; Reuben L. Robertson, of Virginia; Edgar A. Mearns, of New York; William D. Crosby, of New York; Charles M. Gandy, of New Jersey, and James E. Pilcher, of New York.

THE NEW YORK SKIN AND CANCER HOSPITAL is trying to secure a piece of land for its suburban convalescent department. We trust the managers will be successful in their benevolent object. In this connection we would say that it has been asked why the dermatologists have taken up the management of cancer, which belongs to surgical pathology. One of our New York dermatologists, in his work on "Skin Diseases," has said that "the dermatologist should interfere in carcinoma only in those cases which have the character of epithelioma, and are easily destroyed by caustics." It is certainly true that patients with cancer should have the attendance of general surgeons and practitioners.

DR. MILTON JOSIAH ROBERTS, of New York, was tendered a brilliant reception by Dr. Wm. H. Daly, of Pittsburg, Pa., at the latter's residence, on Thursday, December 20th. There were in attendance a large number of representative medical gentlemen.

MEDICAL TRAMPS IN BOSTON.—At a meeting of the Suffolk District Medical Society, Dr. H. I. Bowditch requested the privilege of occupying a few moments for the purpose of warning the profession against a band of medical tramps which was infesting Boston and its suburbs, and by every expedient seeking to obtain pecuniary aid from physicians. One of these impostors had suffered an amputation of the thigh, wore an artificial limb, professed to be a graduate of Harvard, and the son of a physician, and presented plausible testimonials recommending him to the profession. The letters of commendation were found by Dr. Bowditch to be forgeries, and the man himself is a swindler. Another member of this band of conspirators is a young man who is elaborately dressed and makes a favorable appearance, and whose habit is to call at the physician's house when the doctor is away. He represents himself to be the son of a celebrated physician of New York, who is a very intimate friend of the physician at whose door the young man is standing. He further states that he has been robbed of all his money and desires to borrow a sum, generally from three to five dollars, to aid him in reaching his home. Upon being informed that the doctor is not at home, his eyes fill with tears and he appears to be in great distress of mind, and at length endeavors to borrow the sum required of the person who has come to the door. If he does not succeed in this ruse, he asks the time at which the doctor will return, and is very particular *not* to return at that time. Another is a man of swarthy complexion, who pretends to be from India, but is probably an arrant cheat.

FIRE IN THE WARD'S ISLAND LUNATIC ASYLUM.—The towers, spires, roof, attic, and part of the fourth floor of the new east wing of the City Asylum for the Insane, on Ward's Island, were destroyed by fire December 21st. No patient or employé was hurt, and the loss, about $20,000, is not covered by insurance. But for a westerly wind the greater part of the seven buildings of which the asylum consists would probably have been destroyed, because the fire apparatus on the island was out of order, the water-supply inadequate, and there was gross blundering in the transmission of intelligence of the fire to this City. The fire started in the attic, from what cause is not known. There were 90 patients in the burning building, but they were safely transferred. Subsequently all the patients in the eastern buildings, 497 in all, were transferred to the western wings. Some one blundered in that the provisions for suppressing the fire were so inadequate. The responsibility appears to be chiefly upon the Commissioners of Charities and Correction, who for eight years have known the defects without remedying them.

Reviews and Notices.

A Treatise on Syphilis in New-born Children and Infants at the Breast. By P. Diday, ex-Surgeon to the Hospital de L'Antiquaille, Lyons. Translated by G. Whitley, M.D. With Notes and Appendix by F. R. Sturgis, M.D., Professor of Venereal and Skin Diseases in the New York Post-Graduate Medical School; Surgeon to the Venereal Division of Charity Hospital, Blackwell's Island, etc. New York: William Wood & Co. 1883.

The publishers are certainly to be congratulated upon their choice of M. Diday's scholarly treatise for this (October) number of their Library of Standard Medical Authors. They have, moreover, been especially fortunate in having secured the services of Dr. Sturgis to edit this American edition, who, it is needless to state, has admirably performed a somewhat thankless task and added materially to the value of the book. The *ensemble* of the issues of this Library is far too well known to call for further mention at this time. In this particular instance, however, we desire to call attention to the elegant colored lithograph which faces the title-page. A single artistic and carefully executed plate like this is worth a thousand of the fearfully and wonderfully made cuts with which our present literature is so largely besprinkled.

The book proper is primarily divided into five parts: etiology, description, prognosis, medico-legal bearings, and treatment. The subdivisions under each are exhaustive; and each point is discussed vividly, earnestly, and thoroughly, while a wonderful profusion of illustrative cases is advanced. The author succeeds in clinching the reader's attention at the start, and deftly holds his interest to the end with that graphic art and delicate cogency so characteristic of the French, the essence of which the translator has for the most part very happily caught.

In the Appendix, Dr. Sturgis expands, in a masterly manner, two of the more important points: "First, the question of the viability of children born with the taint of hereditary syphilis, the mortality which occurs among them, and the causes which produce death; and, secondly, the accidents known under the name of syphilis hereditaria tarda, or late congenital syphilis."

We have no hesitation in ranking the work among the most suggestive and valuable books of the year.

Hemiatrophy of the Tongue in Locomotor Ataxia.—Dr. Gilbert Ballet writes in *Le Progrès Médical* of October 27, 1883, concerning a symptom of tabes dorsalis, mentioned by few writers, yet of frequent occurrence according to his experience, viz., hemiatrophy of the tongue. The atrophy is in every case unilateral, although the other signs of locomotor ataxia are bilateral and often nearly symmetrical. There is a marked diminution of size on one side, whether right or left, and on this half there are numerous ridges and grooves, giving a peculiar appearance to the organ. There is sometimes a slight trembling with fibrillary contractions. The tip of the tongue is sometimes deviated slightly toward the atrophied side. This hemiatrophy interferes very little with speech, and not at all with mastication and deglutition. In most of the cases observed by the author there was paralysis of some of the eye-muscles or atrophy of certain muscles of the extremities. A fact that renders this symptom of special importance is that it is among the earliest manifestations of tabes dorsalis. It may, in fact, exist at a time when the other signs are either very obscure or have not yet made their appearance. When, therefore, unilateral atrophy of the tongue is encountered, one ought at once to think of the possibility of locomotor ataxia.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, December 21, 1883.

S. O. Vander Poel, M.D., President, in the Chair.

THE PREVENTION OF PUERPERAL INFECTION.

Dr. H. J. Garrigues read a paper on the above subject. (See page 703.)

The discussion was opened by Dr. R. A. Murray, who was Dr. Garrigues' immediate predecessor at Charity Hospital. He had been especially interested in Dr. Garrigues' good report, because, despite all the precautions used while he was in charge of the service the mortality from puerperal fever was nearly eight in one hundred cases of confinement, and the form of fever seen was very similar to that met with in Bellevue Hospital. Puerperal peritonitis was seldom seen, but puerperal diphtheria occurred very frequently, usually beginning at the vulva and extending up the vagina, but in only a few cases was it seen in the uterus. It was also seldom ushered in with marked symptoms. The ward was disinfected from time to time, but it was finally given up, and when Dr. Garrigues began his service it was a new ward so far as confinement cases were concerned, and probably that fact influenced the results somewhat at least, yet he questioned whether so good results would have been obtained without the practice of antiseptic midwifery. Dr. Murray thought it would be difficult to carry out in private practice the details given by Dr. Garrigues, but the material part could be adopted by thorough disinfection of the napkins, and washing out the vagina before and immediately after delivery, and treating all lacerations with bichloride of mercury solution or iodoform. He had seen cases in which the parts had been actually cauterized with carbolic acid, and yet the diphtheritic exudation returned as quick as ever after the removal of the eschar. It might seem that such details as had been given by Dr. Garrigues are meddlesome and not warranted, but in hospital practice they must be adopted in order to prevent the spread of puerperal fever, although he thought it was unnecessary to adopt them in private practice.

Dr. W. Gill Wylie said the paper by Dr. Garrigues confirmed the views which he expressed in a paper read about six months ago, and he was thoroughly in favor of the use of antiseptics, even in private practice, as it is well known that the most successful obstetricians have, occasionally at least, had cases of puerperal fever develop in their practice. Since he began their use in Bellevue Hospital he had employed them in private practice; that is, had caused the vagina to be washed out with a solution of carbolic acid—usually one to thirty—the body of the patient washed with the same solution, all the bed-linen, two sets of blankets, and napkins to the number of thirty at least, all carbolized, and in only a single case had he seen any signs of septic fever, and that was one in which he used forceps in a dry labor. Now he would use the bichloride of mercury solution in place of carbolic acid.

In all that had been said recently on this subject he thought sufficient stress had not been placed on *perfect drainage*, and especially after abortion. This can be secured by dilating the cervix, and, if necessary, a drainage-tube should be used.

Dr. W. R. Gillette thought all must admit the importance of the subject under discussion, and while there might be some difference of opinion concerning the exact methods by which the principle was to be applied, it was scarcely worth while to dwell upon them. With regard to the compress presented by Dr. Garrigues, however, he was unable to understand how it could be of special service with the woman lying in bed; certainly it could not

be kept in close coaptation with the parts, and therefore sufficient space would be left for the entrance of germs. Still the theoretical objection should not weigh much against the results of actual experience in its use. He sincerely hoped the good report made by Dr. Garrigues would be continued, but his experience in the same hospital allowed him only to hope for its continuance. He thought the fact that Dr. Garrigues' service began in a new ward, as mentioned by Dr. Murray, may have had considerable to do with the immunity from puerperal fever, and he also wished that Dr. Garrigues had gone back to 1875, and given the statistics for that year, when the service was transferred from Bellevue.

At the time the change was made forty women were transferred and only one suffered from puerperal fever, and the prophylactic measures were simply cleanliness, bathing with carbolic-acid water, and keeping them as far apart as possible in the lying-in room. Of the six hundred and thirteen women confined during that year, only three had puerperal fever. He thought this record was even cleaner than that given by Dr. Garrigues, and it was obtained by perfect cleanliness.

Dr. A. S. Hunter was in accord with the author of the paper, as to the value of cleanliness and the use of antiseptics, and there was no question but that better results had been obtained since their adoption than were secured before special antiseptic measures were introduced. He was in accord with Dr. Gillette concerning the compress to be applied to the vulva, and thought the rubber muslin would be liable to get folded so as to bring a waterproof surface against the vulva and do more harm than good. Moreover he thought it impossible to keep it in close position with the external genitals. Besides he thought clots would be retained in the pad, and in that way the door opened for the entrance of germs. He also preferred to use Dr. Lyman's silver tube rather than the glass tube, and preferred Davidson's rather than the fountain syringe. He thought that carrying out the suggestions made by Dr. Garrigues was not at all difficult. In private practice he would reject the compress, would use vaginal injections, and in cases of septicæmia, intra-uterine injections, and in addition would have a napkin, partially saturated with carbolic or bichloride solution, laid against the external genitals.

Dr. S. Baruch congratulated the Society on having had presented to it a paper in which the praises of antiseptic injections in normal labor had not been sung. He had attended about nine hundred cases of labor, had met with very many complications, and had had only one death preceded by febrile symptoms. He had not used prophylactic injections very much until Dr. Wylie read his paper, and since then had followed the directions given, but his experience in their adoption had been somewhat singular, as in each of the six cases in which he employed them fever developed, undoubtedly due to septic process, occurring from the fifth to the eighth day after labor. Dr. Baruch then spoke of the objections to antiseptic prophylactic injections, such as disturbing the woman, displacement of clots, and thus opening avenues for auto-infection, tearing of recent adhesions, etc., all of which had been seen in hospital practice. He believed that simple cleanliness before, during, and after labor would do all that can be done to render labor safe, and that, if it was necessary to meddle, the introduction of iodoform pencils into the uterus or vagina was the least harmful probably.

Dr. F. V. White referred to his experience in Bellevue Hospital thirty years ago, when it was the practice to wash out the vaginas of all lying-in women every morning with liquor sodæ chlorinatæ. Certainly in this respect Bellevue had priority. He cited an instance where obscure symptoms of puerperal fever developed in one of the patients, and she was transferred to another ward. The vaginas of the remaining women were washed out, he continued in his service, yet no other case appeared. The patient removed died about two weeks afterward and autopsy revealed extensive peritonitis. He had endeavored to have his private patients use vaginal injections on the second day after confinement; sometimes had succeeded, and many other times had failed. Of the two thousand cases of labor which he had attended he had not lost any patients from puerperal fever. He had not been able to remove the placenta with the ease mentioned by Dr. Garrigues.

Dr. J. P. Garrish had attended four thousand cases of labor in forty years, and had had only two cases of puerperal fever. He never allows a nurse to attend who has recently been in attendance on a case of any contagious disease. He thought intra-uterine injections should be avoided in normal labor. The duty of the physician is to assist nature when she is wrong. He had had only private practice, to be sure. Dr. White had said that Bellevue deserved credit for being the first to wash out the vaginas of lying-in women; so also it had the reputation of being the place where the greatest number of women died when the lying-in service was there.

Dr. White said they did not in his time.

Dr. Garrish objected to applying anything like a compress to the external parts.

Dr. J. C. Peters believed that bichloride of mercury solution would prove a more successful germ destroyer than any agent which has been used.

Dr. Garrigues said his statistics were based upon experience in the *old* wards and not the new one first occupied. He emphasized the necessity of adopting precautionary measures in private practice. He also stated that the compress had been found by actual measurement to be adapted to the distance between the thighs as the woman was lying in bed; that it was applied by the nurses with the exactness with which any surgical dressing was applied, and that while it was not absolutely air-tight, it was as much as could be used with the presence of a lochial discharge. Dr. Garrigues then read from his paper where he had made a quotation from Dr. Gillette's report, and it appeared that he had included the year 1875, but the figures varied considerably from those given by Dr. Gillette. A metallic tube cannot be used if the bichloride solution is employed. He would never use intra-uterine injections except for cause, and for him that cause would be fear of entrance of septic material, as in manual or instrumental interference, or the presence of a dead child. He thought that under ordinary circumstances vaginal injections may have done a great deal of good in hospital practice, although he had given them up because he had reached the same result by other means. In private practice he thought there was no danger in their use, and at the same time he thought no harm would follow if something else was substituted, but if not, they should be resorted to. The dressing recommended rendered vaginal injections superfluous, and the nurses had nothing to do with the genitals of the patients. Of course, cleanliness is proper, but it is not sufficient. He agreed that labor is a normal process, but a woman confined in a hospital is in an abnormal situation, and statistics have established the fact that antiseptics have markedly reduced the mortality in lying-in hospitals.

The Society then adjourned.

An Aged Parent and a Long Umbilical Cord.—Dr. F. W. Putnam, of Binghamton, N. Y., writes: "On December 5, 1883, I attended Mrs. B——, aged thirty-seven, in her second confinement. Cranial presentation, first position; labor normal, terminating three hours after my arrival. The umbilical cord was thirty-one and one-half inches long, and had a knot in it eight inches from the body of the child. The child, a boy, is alive and doing well. The father is seventy-seven years of age!"

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 20, 1883.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE PROGRESS OF BIOLOGY IN EUROPE.

DR. C. HEITZMAN spoke on the above subject and said that in 1872 and 1873 he published a series of new observations concerning the structure of the single elements of which the entire animal body had been supposed to be composed. He did not expect the immediate approval of scientists, nor had he received it, but within the last two or three years very great progress had been made in this direction. A little more than one year ago he published a book in which these new views were set forth, and it was met by warm friends and bitter enemies. Some of the criticisms deserved attention; others were the outbreak of personal enmity. The theory was that so-called protoplasm, which had been thought to be structureless, has, at a certain stage of development, a well-marked reticular structure; that the nucleus, if hollow, has in its interior a reticulum; that the so-called nucleoli were thickenings at the points of intersection of these delicate fibres, formerly called granules; that the locomotion observed depends upon contraction of one part and expansion of another. Quite recently a large number of German microscopists had observed changes in the reticulum of the nucleus, and special reference was made to the writings of Strasburger Flemming and others.

Dr. Heitzman said he was aware that the existence of this reticulum had been denied by some microscopists in this country. One gentleman in Philadelphia had denied its existence because he was unable to see it.

The second point in his theory was that the basis substance seen between these so-called cells is endowed with all the properties of living matter due to the presence of a reticular structure identical with that seen in the protoplasmic bodies. Dr. Heitzman then gave an account of his method of procedure to demonstrate this point, namely, by experiments with cartilage, and best shown when a slight amount of inflammation is obtained with calcareous deposition in the basis substance.

Having proved this point satisfactorily to himself he then advanced the view that instead of the body being built up of cells, these so-called cells are uninterruptedly connected with each other by delicate fibres of living matter and the whole body is of the general structure of the amœba. Dr. Heitzman then spoke of Stricker's views concerning the reticulum of the protoplasm, nucleus, and basis substance, and said that he had admitted there is no difference whatever, with reference to capacity for producing life, between the basis substance and the cells. "Why use the term cell, then?" asked Dr. Heitzman. To which Stricker replied that the word should not be altogether abandoned, and he continued to use it in order that he might be understood by those whom he addressed. Concerning the exact function of the basis substance there was some difference of opinion between S. Stricker and Dr. Heitzman.

The speaker then directed attention to the changes in view concerning the essential nature of inflammation which necessarily accompanied his theory, and discussed at some length the views held by Recklinghausen and Cohnheim concerning the origin of pus-cells. Dr. Heitzman then spoke of the structure of epithelia and the views of Ranvier, who admitted that they are connected with each other by what he calls "filamentous connections," without committing himself to any theory concerning their essential character.

Passing from this point the speaker touched upon the question of tuberculosis and defined tubercle to be a vascular inflammatory product, and the reason why new vessels do not form in the little nodules is because there is not sufficient living matter for their reproduction. He rejected Koch's theory of the bacillus as a cause of tubercle, and maintained that tuberculosis can be produced artificially by the introduction of various substances into the tissues of animals. Special reference was made to the work of Spina, and to the fact that he (Spina) had introduced sterilized lycopodium seed into the abdominal cavity of a guinea-pig, and ten or twelve days afterward found tubercles in the liver, kidneys, and intestines, which on microscopical examination were found, each one of them, to contain a few lycopodium seeds. He regarded Koch's bacillus as the product and not the producer of tubercle. In conclusion, Dr. Heitzman spoke briefly of the theory of constitutional conditions being diagnosticated by microscopical examination of the colorless corpuscles of the blood.

DR. W. H. WELCH remarked that Dr. Heitzman had chosen for his theme a very broad subject, but he had confined his remarks to a small department of biology, namely histology, and chiefly to one corner of histology, the morphology of the cell.

In 1873 Dr. Heitzman promulgated his doctrine regarding the structure of cells and of the animal body. The main features of this doctrine were, first, that the cell-substance is pervaded by a network of fibrils; second, that the nucleus and the nucleolus are simply condensations of this network, accumulations of living matter identical in structure with that in the cell-body, and, third, that this network of living substance passes out from the apparent cell-boundaries and pervades the basement substance and connects the cells with each other. The human body, therefore, is essentially a large amœba.

As regards the first point Dr. Welch remarked that before Dr. Heitzman's publication a differentiated structure of protoplasm had been described. After Max Schultze, Brücke, and Beale, in 1862, had overthrown the views of Schwann and Schleider as to the vesicular structure of the cell, protoplasm was usually described as granular or hyaline. In the bodies of some cells, however, particularly of ganglion-cells, certain details of structure had long been made out by Stilling, Schultze, Arnold, and others. For certain cells of amphibia Leydig, in 1865, described a reticulated structure of the protoplasm. The first, however, to ascribe a fibrillated structure to cells in general was Frommann. In 1866 he described in neuroglia-cells, not first in ganglion-cells as Dr. Heitzman had quoted him, fibrils proceeding from the nucleoli through the cell-bodies into the surrounding substance. In 1867 Frommann extended this observation to many other kinds of cells and claimed a fibrillated structure as a general characteristic of cells. Flemming is therefore right, in his important work on cell-substance, in granting to Frommann, and not to Dr. Heitzman, the priority in the discovery of the fibrillated structure of protoplasm. It must be admitted, however, that Dr. Heitzman surpassed all his predecessors in the definiteness and boldness with which he described the reticulated structure of protoplasm.

The existence of a fibrillated structure to protoplasm has been demonstrated during the last few years by several competent observers. Especially on specimens hardened in chromic acid, which Dr. Heitzman prefers, it is by no means difficult for any one, even without a trained eye and without remarkable lenses, to see a reticulated structure in the bodies of many cells. How far the reticulum, demonstrable by chromic acid and by some other reagents, corresponds to structures in the living cell is a question not easily answered. That chromic acid often exaggerates the distinctness with which a reticulum can be seen is certain.

Dr. Welch said that the most satisfactory studies on the structure of cells had been made by Flemming. Flemming, working with the best objectives, such as Zeiss' oil-immersion No. 18, had apparently demonstrated that most, if not all, animal cells have a fibrillated structure of the cell-substance. Whether the fibrils are arranged in the form of a network Flemming had not been able to satisfy himself. Flemming's descrip-

tions and drawings are calculated to inspire confidence by their objective nature, and by the absence of such uniformity of detail as characterize the drawings and descriptions of Dr. Heitzman. It is questionable whether Dr. Heitzman's descriptions apply to the structures seen and depicted by Flemming.

Dr. Welch remarked that the really novel features in Dr. Heitzman's doctrines related to the structure of the nucleus and the pervasion of the basement substance by a network of living matter continuous with that in the cells. In neither of these points had Dr. Heitzman's views been confirmed by competent observers.

There are serious objections to regarding the nucleus simply as an accumulation of the substance composing the cell-body. No histological studies of late years surpass in interest and importance those of Auerbach, Strasburger, Flemming, Hertwig, and others, relating to changes in the nucleus attending cell-division. These observations go to show that the nucleus has a dignity and a function of its own. The nucleus differs from the cell-body by its optical properties, by its reaction to staining dyes, and probably in its structure. A fibrillated structure of the nucleus is often more easily demonstrated than that of the cell-body; but Flemming, who speaks with the greatest authority in this matter, says that on the clearest specimens and with the best optical means, he has never been able to satisfy himself of a continuity between the fibrils in the nucleus and those in the cell-body. He therefore, and it appears justly, rejects Dr. Heitzman's view that there is no difference, except in density, between the nucleus and the cell-body.

Dr. Welch said that the third and the essential point in Dr. Heitzman's doctrine was unconfirmed by competent observers. This point is that the cells throughout the body are connected by a network of living substance which lies everywhere in the basement substance. That certain cells are connected with each other by processes has long been known. In 1870 Bizzozero corrected Max Schultze's error, and established the true relations of the so-called prickle-cells to each other. The anastomoses of other cells, particularly of connective-tissue cells, have also been generally, although not universally, admitted. But it is mainly upon his observations as to the existence of a reticulum of living matters in the basement substance of hyaline cartilage that Dr. Heitzman bases his doctrine. This reticulum he claims to demonstrate by nitrate of silver, chloride of gold, and even to see without the addition of reagents. Dr. Welch said that the silver pictures in general are notoriously difficult to interpret, but even these cannot be satisfactorily produced in cartilage, except near the perichondrium. To base a new scheme of structure of protoplasm, intended to overthrow all previous conceptions of the subject, upon such uncertain pictures, is a bold and unjustifiable proceeding. Dr. Heitzman's views concerning the structure of hyaline cartilage have not been confirmed, or, more strictly, have not been confirmed except in his own laboratory and in that of Stricker in Vienna; and, as he has justly remarked, these laboratories stand alone, as islands in the scientific world. The only original features of Dr. Heitzman's doctrine—namely, the structure of the nucleus and the existence of a network of living substance throughout the basement substance—remain unproved and unaccepted, save in the two laboratories mentioned.

Dr. Welch said that Dr. Heitzman had touched upon several other topics of too wide scope to admit of satisfactory discussion at present. He would, however, say that upon none of these topics was he in accord with Dr. Heitzman. As regards the subject of emigration of white blood-corpuscles, Dr. Welch considered that if anything in pathology was certainly established it was the fact of this emigration, and he doubted whether Recklinghausen would admit that he occupied the same position regarding inflammation as Dr. Heitzman does.

As regards the question of tuberculosis, Dr. Welch said that there was only one point in Dr. Heitzman's remarks which he would touch upon. Dr. Welch said that Dr. Heitzman was in error when he claimed that inoculation of rabbits and guinea-pigs with various non-tuberculous substances was capable of producing artificial tuberculosis. Cohnheim and Wilson Fox have both retracted the results of their former experiments, and admit, as is generally admitted by the best modern pathologists, that inoculation only with substances containing the tuberculous virus is capable of producing artificial tuberculosis. The experiments and observations of Spina are worthless, and bitter and caustic as was Koch's criticism of Spina, it was justified. Spina's competency is well illustrated by the attempt to produce tuberculosis by inoculation with lycopodium seeds. As might have been expected, each lycopodium seed was the centre of a little inflammatory nodule. But who, besides Spina and Dr. Heitzman, would identify such nodules with a genuine tuberculosis?

The only addition, Dr. Welch said, which Dr. Heitzman had made to this doctrine of the structure of protoplasms, since he had been in New York, was the remarkable statement that by examining the living matter of certain cells he was able to tell the constitution of the individual from whom they came. This addition Dr. Heitzman had not presented fully to the Academy to-night. Dr. Welch would not therefore discuss it, but he supposed that this view could hardly have been seriously advanced by Dr. Heitzman. Dr. Welch protested against Dr. Heitzman's assertion that his peculiar doctrines had been widely accepted in America, and this protest was needed when it was asserted in certain German journals that it was only in America that such views could gain credence.

Dr. L. Elsberg, before discussing the subject, asked Dr. Heitzman concerning Virchow's views with reference to his theory, as he had been quoted for and against it.

Dr. Heitzman replied that Virchow said he would put arms to the ground only when it is proven that the basis substance has the same physiological dignity as the cells proper, which he (Virchow) did not accept as yet demonstrated.

Dr. Elsberg then said that two years ago he presented to the Academy the results of investigations made with hyaline cartilage, especially in a case where he had examined the hyaline thyroid cartilage of a man forty-eight years of age that had simply been hardened in chromic acid, and showed not only connecting filaments between the cartilage corpuscles, but within the intercorpuscular space accumulations of matter which were proved to be essentially of the nature of living matter, and the same as that contained in the corpuscles themselves. He would not object to the name cell, provided it was accompanied by the explanation of its real nature; but if it had been proved that it was not a cell, in the sense in which the term had been employed, he thought the word might as well be abandoned. After all, as long ago had been maintained by Fletcher, there are only two kinds of matter in the human body, the living and the non-living. Living matter, however, is not simply vital force added to an otherwise non-living substance, but a matter endowed with all the manifestations of life which are due to this peculiar matter, call it protoplasm, bioplasson, or what not, and the main points on which Dr. Heitzman's views and the cell doctrine really diverge are the real points as to whether the view of those who maintain that the living properties pervade every portion of the organism to which life can be ascribed is true or not.

Dr. Heitzman, in closing the discussion, directed attention to the fact that as far back as 1839 the reticulated structure of epithelium had been very well illustrated. The question was not who saw it first, or whether or not there is a reticulum, but his observations had been such as showed that the protoplasm is living matter. He

had not claimed any priority, but Theodore Eimer had claimed it for him, and all Dr. Heitzman wished to show was that to-day the best microscopist in Europe, S. Stricker, has acknowledged the correctness of the claims he made in 1872 and 1873.

The Academy then adjourned.

Army News.

Official List of Changes of Stations and Duties of Officers of the Medical Department, United States Army, from December 15 to December 22, 1883.

CAMPBELL, JOHN, Lieutenant-Colonel and Surgeon. Having completed the duties pertaining to the office of the Medical Director of the late Department of the South, to proceed from Newport Barracks, Ky., to New York City, and assume the duties of Attending Surgeon in that city. S. O. 284, par. 12, A. G. O., December 12, 1883.

CLEMENTS, BENNETT A., Major and Surgeon. Relieved from duty as Attending Surgeon, New York City, and detailed as member of Army Medical Examining Board, now in session in New York City. S. O. 284, par. 12, A. G. O., December 12, 1883.

WILLIAMS, JOHN W., Major and Surgeon. Leave of absence on surgeon's certificate of disability granted in S. O. 157, November 12, 1883, Department of the Columbia, extended five months on surgeon's certificate of disability. S. O. 286, par. 6, A. G. O., December 14, 1883.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the two weeks ending December 25, 1883:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 18, 1883.....	2	22	64	5	44	42	0	0
December 25, 1883.....	0	26	65	1	42	40	0	0
Deaths.								
December 18, 1883.....	1	3	6	4	13	21	0	0
December 25, 1883.....	1	5	6	2	8	24	0	0

LIABILITY OF SHIP-OWNERS FOR MEDICAL ATTENDANCE.—A very important decision, relating to the liability of ship-owners for medical assistance to sailors injured on shipboard, has recently been given by the Supreme Court of Pennsylvania, and a full account of it is given in the *Maritime Register*. It was an appeal from the Court of Common Pleas, Philadelphia, and the judgment of the lower court was affirmed. It appears that the engineer of a tug-boat lying alongside a wharf, was severely scalded by a burst of steam from the cylinder head. Medical assistance was immediately summoned, and the injured man was, at his own request, taken home, instead of to the marine hospital, to which place the master of the tug offered to take him. The tug-boat owners were called upon to pay for medical attendance to the engineer, but refused upon the plea that the marine hospital service was offered to the man, and his refusal to accept it absolved the vessel owners from any liability for such attendance. This plea would by many ship-owners be held well taken. But the lower court decided against it upon the ground that the acts of Congress relative to the marine hospital service "do not supersede the right of the seamen, under the general maritime law, to be cured at the expense of the ship to which they belong, of all sickness or injury occurring to them while in the service of the ship." The Supreme Court takes the same view. The liability of the ship for medical attendance to sick seamen is well settled. The tug-owners claimed, however, that the ship is not responsible if the seamen be taken home from the vessel, that the sailor should remain with his ship, and that if he is removed he cannot of his election choose for his recovery whatever place he may wish. This would leave the election as to place with the ship-owner—a position which is untenable. Upon this point and upon that relating to medicine-chests and medical attendance on shipboard, the Supreme Court gives an opinion which is good law, and what is better, good sense. In the first place it shows that a seaman, for injuries incurred in its service, is entitled to be cured at the expense of the ship. It further points out the fact, which ship-owners often overlook, that hospital dues collected for the support of the marine hospital service are paid by the sailor himself, and have really nothing whatever to do with the ship. A sailor is entitled, upon proper application, to free hospital service, but that is not a service furnished by the ship-owner. The sailor can take it or not as he elects. It is a wise provision which the law has made compulsory upon him, not upon the ship-owner. It is not a provision made by ship-owners "in relief of their liability under law maritime." The maritime law protects the sailor in all the seas and seaports of the world. The marine hospital service is confined to some few of our home ports. The several acts of Congress relating to hospital dues are, therefore, only auxiliary to the ancient maritime law giving injured seamen the right to be cured at the expense of the ship, and simply afford seamen an additional safeguard. This view is generally adopted by the courts.

CHLOROFORM NARCOSIS INDUCED DURING NATURAL SLEEP.—Dr. H. Culbertson, retired Assistant Surgeon, U.S.A., of Zanesville, O., reports the following case: "Early last September I was called by Dr. A. Ball, of this place, to see a child two years of age, which had, the day before, incurred an extensive lacerated wound of the right cornea at its lower and inner margin. The iris was enclaved in the cut. Dr. E. A. Hildrith, of Wheeling, W. Va., was present. The child was asleep when we arrived, and nothing had been given to induce somnolency. It was proposed to chloroform without awaking the child. Dr. Ball did this successfully by holding the chloroform upon a napkin about eight inches from the child's face, and gradually approaching the inhalant to the face as long as the patient did not move, withdrawing it when it stirred to the original distance, and then gradually approaching again, until finally, bringing it close to the face, it no longer moved, and in ten or fifteen minutes complete narcosis was secured, when the enclaved iris was drawn out, excised, and the eye bandaged. When we departed the child was still asleep, but awoke half an hour later."

A CASE OF SPINA BIFIDA WITH THE LARGEST TUMOR ON RECORD.—Dr. M. D. Briggs, of Belle Plaine, Iowa, writes: "On the 2d of November last I was called to see the child of Major J——. On arriving I found an infant of ten months burdened with an immense growth springing from the lumbar region, the entire left buttock and hip, and from the upper portion of the posterior aspect of the left thigh. It was a large sac distended to its utmost capacity with a straw-colored fluid. Of course the diagnosis and prognosis were not difficult to make. I only report it as interesting on account of the great size of the tumor, which measured *thirty inches in its longest circumference and twenty-six inches in the transverse.* In all the literature to which I have had access

I cannot find an account of any such growth that even approximates it in size. I endeavored to have it photographed, but could not obtain the consent of the parents. It was already ulcerating at the most dependent portion. In a few days it ruptured with a fearful gush, and in five days the child died from meningitis. A post-mortem could not be obtained.—The growth was about the size of an orange at the time of birth."

A Fatal Case of Inversion of the Uterus due to Traction on the Cord.—Dr. Geo. Huntington, of La Grangeville, N. Y., gives an account of a case which bears an instructive lesson. He was called to attend a woman in labor, but as she lived some distance off, the labor had terminated and the woman was dead before he arrived. It seems that she had been attended by an old colored midwife who, after the birth of the child, had made such traction on the cord that the uterus was inverted. Great hemorrhage occurred, and the woman died within an hour after delivery. "The case shows," writes Dr. Huntington, "two things: one being the danger that country women more especially run by entrusting their lives to ignorant old women, who doubtless mean well, but whose ignorance often leads them to do irreparable mischief; and the other, that forcible traction on the cord is dangerous and should never be resorted to."

Two Unusual Parturitions.—Dr. L. Byron Dawley, of Seneca Falls, N. Y., relates the history of an unusual parturition, but which, though rare, was almost exactly like one reported by Dr. W. H. Borham in the *Lancet* last August. Dr. Dawley says: "I attended, October 2, 1881, Mrs. C——, aged twenty-seven, Irish, well made, fair woman, the mother of one child born at full term. Had been in labor about four hours when I got there. As I entered the door I heard very loud cries, and heard her say, 'There, it has come.' I went as soon as possible to the bedside, and on lifting the covering, to my great surprise, found the placenta, membranes, waters, and child all intact. The child was floundering about in the liquid, trying to free itself. I lifted the mass, and to my much greater surprise found that the membranes did not rupture. I then tried them with my fingers, but finally had to resort to the scissors. The child, a female, was quite small, but lived, and is a smart child to-day. The mother made a good recovery." In Dr. Borham's case the patient was also a fair-complexioned, well-made woman aged twenty-eight. The child, membranes, and placenta came away together, the child being alive and the membranes unruptured.

An Antipessarist.—Dr. J. Mathews Duncan is responsible for the following outburst: "In the present great abundance of contorted bits of wood, and metal, and vulcanite, and what not, called pessaries, my advice to you is *Punch's* advice to a young man contemplating marriage—Don't! Think twice before beginning the often baneful practice of using any instrument, teaching a woman to depend on what, if not positively useful, is positively injurious, though perhaps not much so. Many a woman has suffered from, and many a woman has died of, a pessary; but most pessaries, as I find them in use, are nearly innocuous for evil or for good. They are always harborers of dirt, and they always keep the mind watching the part; they are all liable to decay, and require, if long used, to be renewed. They are all undesirable additions to the contents of the pelvic excavation, and, if they are efficient, must, of course, cause more pressure, though perhaps on different parts, than that caused by the organ or organs which they keep in an altered position. Curious things are anteflexion pessaries. In regard to their giving relief I express no opinion, but I do say that if they give relief it is not by undoing the flexion, and keeping it undone, keeping the womb straight. I have seen most kinds of anteflexion pessaries as placed by their inventors, and too often replaced and replaced, but I have never seen one materially modify the flexion. I have myself never used one, and have no intention of doing so. There is another bad and too common practice which I must not omit to mention here, that is, what is called straightening or putting up the womb, or replacing it time after time by the probe or finger. This has no other effect than to irritate the organ, for the displacement recurs immediately after the probe or finger is removed, as the practice itself shows."

A Case of Kerosene Poisoning.—Dr. C. S. Wheeler, of Williamsburg, Mass., sends us the history of a case of kerosene poisoning, which is instructive, as these accidents are rare. He says: "I was called October 29th to see a child, eighteen months old, who had swallowed an unknown quantity of kerosene, though the amount probably did not exceed two ounces. The little patient, seen one hour subsequent to the swallowing, was vomiting, purging, cyanotic; a tendency to coma existed, the pulse was 130, weak, and somewhat irregular; respiration was also irregular. Treatment: ordinary emetics were given before my arrival, hence only stimulants and alkalies were ordered. After a few days of gastro-enteric febrile movement the child recovered. I have heard of several ounces of kerosene having been taken by adults without perceptible results, but the above case compels me to doubt the statement."

Let Nature Remove the Placenta.—In the *Deutsche Med. Wochenschrift* Dr. Dohrn thus sums up his experience: "1. In one thousand lying-in women, in whom the expulsion of the placenta was left to nature, the results were far better than in one thousand others in whom Credé's method of expulsion was used. 2. The one thousand lying-in women in whom the placenta was spontaneously expelled had considerably less hemorrhage and fever after delivery. In those cases treated by Credé's method portions of the membranes were frequently retained, and there were more fatal cases than in the others. 3. The disadvantages which are conditional to the method of Credé are especially seen in the cases in which the placenta is expressed during the first five minutes. After a longer time the expression was more complete, but never as safe as by the spontaneous method."

American Professors.—America's contributions to science are by no means very extensive, or very often important, that is, as compared with the great volume of German production, in which comparison they seem almost insignificant. We have never duly fostered research, for we have bestowed upon it neither the proper time nor office. There are, we suppose, at least six thousand "professors" in the United States. Are there one hundred and fifty of them active investigators? The time seems remote when every American professor will be expected to be also an investigator, or to contribute aught to the common fund, but among us is a little band of men who have before them the model of Germany, and who are earnestly working for the intellectual elevation of their country. The first object is necessary to render research more important in public estimation, and so to smoothe the way for a corps of professional investigators. Every thoughtful person must wish success to the attempt.—*Science.*

Medical Supply and Demand.—Statistics show that among 1,000 doctors the number of deaths annually ranges between 15 and 25. At this rate the number of deaths annually among the 90,000 medical men of this country would be on an average 1,800. Among the 14,000 physicians of Austro-Hungary the annual death-rate is said to be about 320. If the same ratio existed in this country, the number of deaths annually would be slightly over 2,000. Probably the actual figure is not far from 1,800. On the other hand, the number of medical graduates in 1882–3 was 3,979, or nearly four thousand, and more than double the estimated number of deaths. Account must be taken of the number of physicians who annually retire from practice, and on the other hand of the number of graduates who never enter the practice of medicine. The annual increase of population is probably over a million.

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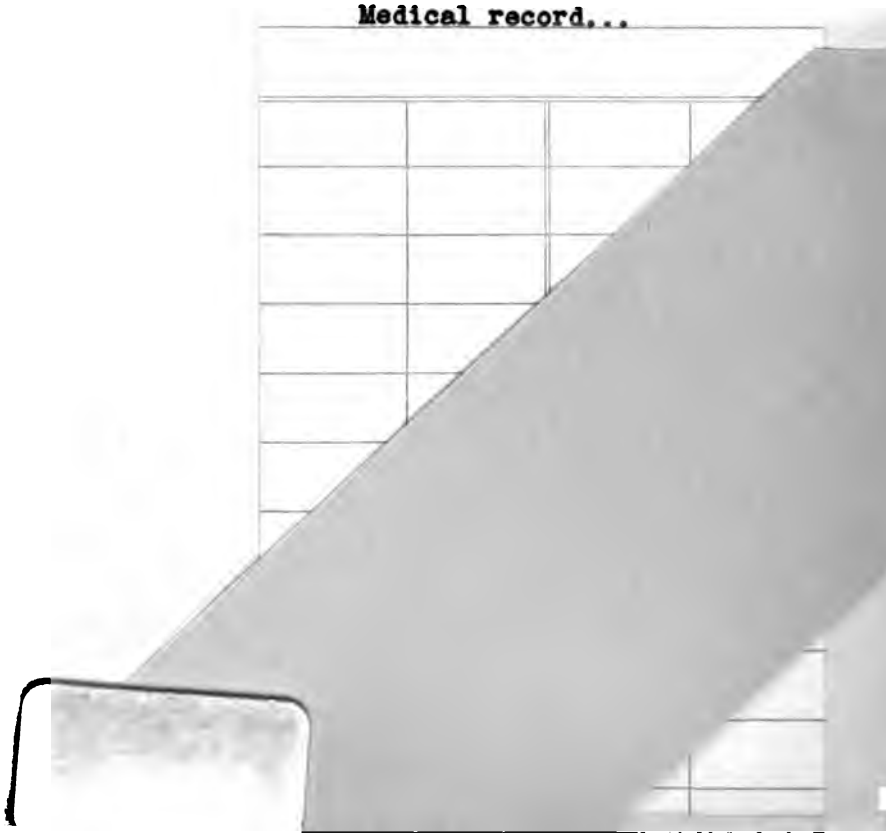
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